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ABSTRACT

This volume is organized according to the World Assembly themes of: (1) innovations in preservice teacher education; (2) innovations in inservice teacher education; (3) innovations in educational technology; (4) innovations in life-long education: the role of distance learning; (5) international dimensions in teacher education; and (6) innovations in regional and international cooperation. Under each theme, there appear selected major addresses given during the plenary sessions. Also appearing are selected comments of panel members, and abstracts of concurrent session presentations. The results of the many discussion groups are represented in the final section, "Summaries of World Assembly Discussions." (JD)

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ICET

INNOVATIONS IN TEACHER EDUCATION: THE PURSUIT OF EXCELLENCE

INTERNATIONAL YEARBOOK ON TEACHER EDUCATION 1984

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INTERNATIONAL COUNCIL ON
EDUCATION FOR TEACHING

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International Council on Education for Teaching

The International Council on Education for Teaching (ICET) is an international association of educational organizations, institutions, and individuals dedicated to the improvement of teacher education and all forms of education and training related to national development.

The Council is incorporated in the United States as a non-governmental organization (NGO), and has official consultative status with UNESCO. Membership in ICET is open to individuals, colleges, universities, government agencies, and private sector organizations who are engaged in educational and training activities.

The Council is governed by a Board of Directors and is provided with professional counsel by a Board of Trustees. Directors and Trustees are representative of the geographical, social, cultural, and professional diversity of the world. ICET activities are administered by an executive office located in Washington, D.C. which facilitates the cooperative projects of its members.

ICET conducts an annual World Assembly as a forum for the worldwide educational community on matters related to national development and teacher education, and publishes an annual volume of proceedings. ICET also provides technical assistance to educational systems and administers a management training program which provides educational leaders with internships in colleges, universities, private sector organizations, and government agencies.

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INNOVATIONS IN TEACHER EDUCATION: THE PURSUIT OF EXCELLENCE

INTERNATIONAL YEARBOOK ON TEACHER EDUCATION 1984

Selected Papers
from
The Thirty-First World Assembly
Bangkok, Thailand
July 23-27, 1984

Editor: Joost Yff
Associate Executive Director, ICET

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In addition, appreciation is expressed to ICET staff members Joost Yff and Dane Russo for their work in preparing this volume.

Frank H. Klassen
Executive Director

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1984

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Preface

The format of the annual World Assembly proceedings has changed in recent years to reflect the increase in program complexity and in numbers of presentations and discussion groups. In addition to the many plenary sessions of the Thirty-First World Assembly, there were panelists who reacted to the plenary presentations, and there were some forty concurrent discussion groups that yielded opinions and ideas which were summarized in the final plenary session.

The volume is organized according to World Assembly themes. Under each theme, there appear selected major addresses given during the plenary sessions. Also appearing are selected comments of panel members, and abstracts of concurrent session presentations. The results of the many discussion groups are represented in Section VII, "Summaries of World Assembly Discussions."

In addition to the six thematic sections, the volume opens with messages from ICET president Paul Masoner, and ICET Board of Trustees chairman W. Clement Stone. The inaugural address by Her Royal Highness Princess Maha Chakri Sirindhorn, and the report to Her Royal Highness by Wichit Srisa-an, are featured in the World Assembly commencement. The keynote address of Wichit Srisa-an and the overview of teacher education in Thailand of Pote Sapianchai serve as the introduction to the volume.

Joost Yff
Associate Executive Director,
and Volume Editor

A Note About the Abstracts

Abstracts within each thematic section of this volume are ordered alphabetically by authors' surnames. The abstracts were prepared by Catherine J. Butler of the ERIC Clearinghouse on Teacher Education, Washington, DC.

Those papers that were selected for addition to the Educational Resources Information Center (ERIC) include an ERIC system document number, which is preceded by "ED" or "SP." Papers in the ERIC system are accessible in microfiche collections around the world. Persons interested in obtaining papers that are not in ERIC are encouraged to contact the authors.

A Message from the President

Thirty-Two Years of Service to the Teaching Profession

Thirty-two years ago, a small group of educators attending the annual meeting of the World Confederation of Organizations of the Teaching Profession (WCOTP) met in Oxford, England to discuss a proposed international effort to improve the quality of teaching throughout the world. It was their considered judgment that this goal could be best accomplished by the development of a new organization, worldwide in its scope, with membership drawn from leaders in the field of teacher education, from national and regional associations of teacher educators, from ministries and departments of education, from universities and colleges, and from among lay persons concerned with the improvement of education. Thus, this dedicated band of educators brought into being the International Council on Education for Teaching.

In the thirty-two years of its existence, ICET has grown to the worldwide scope and stature envisioned by its founders and has indeed become the global voice for teacher education. It has become a symbol of collaboration involving government, business, and education in the task of improving the quality of teaching and the enhancement of educational opportunity for youth and adults everywhere.

Headquartered in Washington, D.C., in the United States of America, the organization is governed by a Board of Directors, representing twenty-three countries, and an international Board of Trustees. It conducts regional and world conferences, educational development projects in many parts of the world, internship programs for educational leaders, training programs for government and business, and cooperative projects with other international organizations that span continents. ICET represents a network of colleges and universities that focus on improving the quality of teaching. ICET participates in UNESCO programs and activities as a Non-Governmental Organization (NGO) affiliate.

All of us who have the honor to be associated with this great organization salute the founders and all those who have contributed so effectively during the formative years. We pledge ourselves to even greater levels of achievement in the years ahead.

Paul H. Masoner, President, ICET

A Message from the Chairman, Board of Trustees

Motivation in Teaching

The art and the power of motivation for educational development is my specific interest. My contribution to this conference is to share with you knowledge which has proved effective in motivating countless thousands of persons to learn, understand, comprehend and apply the art of self-motivation, and to motivate others to motivate themselves; to develop a positive mental attitude, or PMA.

Throughout the history of education it has been said that, "Knowledge is power." This is fallacious. Knowledge is not power. Knowledge is potential power; it is not power until it is applied. Gasoline in your car is not power, it is potential power, it is not power until you use it. Yet throughout our educational systems students have received passing grades primarily through the use of their memories; we have been checking the fuel guages but not trying to see how well the cars can run.

Those of you who have passed psychology courses have gotten credit for memorizing principles. It is likely that neither the teacher nor the students ever learned how to apply and actually use those principles. In these instances, the art of motivation had not been taught. That is, how to recognize, relate, assimilate, and apply principles, particularly in the behavioral sciences, as regards the functioning of the human mind, was not taught. Now what do I mean by that? I will explain.

You recognize a principle, idea or technique when you find yourself saying, "Hey, that's for me!" -- when you know you have run across something that applies to you. You relate that principle, idea, or technique to yourself when you answer these questions: "What does this mean to me?" or "How does this apply to me?" or "How can I use this?" You assimilate a principle, idea or technique when you incorporate it into yourself -- when you make it become part of you. And you put the principle, idea or technique into application when you get moving -- when you follow through with ACTION.

I would like to share some ideas on how to learn and apply the art of motivation with PMA, which is explained further in Success Through a Positive Mental Attitude, a book co-authored by Napoleon Hill and myself. You are the most important living person as far as you and your life are concerned. You are the product of your heredity and environment, and you are an entity comprised of your physical body, your conscious and subconscious mind, your experience in thought and action, and. . . something more, including powers known and unknown. You have the power to affect, use, control, neutralize or harmonize with all of them. You can direct your thoughts, control your emotions and ordain your destiny with a positive mental attitude.

There are three ingredients that are absolutely imperative for continuous success. One is the necessary knowledge of theory about the right way to achieve a specific objective or goal. The second is know how or actual experience of doing it the right way to get the right results. And the third is inspiration in action; specifically, how do I motivate myself and how do I motivate others? A person may know exactly what to do and how to do it, but he may not feel like doing it when he should.

If a person wants to overcome procrastination, if he wants to get into action when he should, he can use self-suggestion: memorizing three words that will flash from the subconscious mind to the conscious mind in time of need. The three words are do it now! When this self-motivator does flash from the sub-conscious to the conscious, if the individual will act immediately on small, easy matters, he will develop the habit so that he will act when great opportunities present themselves, even though he might be hesitant or afraid.

With an original investment of $100 and this art of motivation with PMA, I built the largest insurance company of its kind in the entire world. Let me go back to give you a little of my background. I was born in poverty. We lived in a poor neighborhood. My father died when I was very young. My mother was a seamstress and worked during the day. She established her own dressmaking establishment and did very well. I sold newspapers at age six. I went to a public school and at age nine I learned that which was not taught: how to recognize, relate, assimilate and apply principles into my own life. At age 12 I had my own news stand; at age 16 I sold insurance, and I dropped out of high school. At age 20 I went to night school, got my diploma, and continued on at a university where I spent two and a half years. At that time I read a book, The Magnificent Obsession by Lloyd Douglas. The essence of the book is that when you do good for others without thought of personal gain, without recognition, without expectation of financial return, the rewards are fantastic. They come back ten thousand fold. I read that book throughout the entire night. It thrilled me. It excited me. In the morning I made a resolution from which I have not deviated. I developed a magnificent obsession. My magnificent obsession is, was, and always will be, to change this world; make it a better world for this and future generations. Can it be done? It is being done.

In 1937, I was given a book, Think and Grow Rich which corresponded with my own philosophy, as I am sure that many of you will find when you read this type of literature. Because the philosophy corresponded with my own, I sent the book to all my sales representatives, office employees and staff. Suddenly, we found the key! People learned how to motivate themselves to achieve their goals. We found the vehicle whereby we could help a person who wanted help, to help himself using universal principles, which many of you are unconsciously doing already. I find that everyone who is ready, if he or she has a positive mental attitude, can become successful as an individual and as a contributing member of society.

What does this mean to you? It depends upon what action you take. You are in the greatest profession of all, helping and teaching those under your supervision. Be you teachers of teachers or teachers of children and youth, you not only affect their lives but countless others as well. What's going to happen to you depends upon whether you develop a positive mental attitude and thereby unleash an unlimited store of energy and creativity.

W. Clement Stone, Chairman
Board of Trustees, ICET

COMMENCEMENT

OPENING ADDRESS

Wichit Srisa-an
Deputy Permanent Secretary for University Affairs,
Ministry of University Affairs, and
Rector, Sukhothai Thammathirat Open University
Bangkok, Thailand

Your Royal Highness:

It is indeed a great honour for Sukhothai Thammathirat Open University that Your Royal Highness has come here today to preside over this Thirty-First World Assembly of the International Council on Education for Teaching. It is also a most auspicious occasion for the Organizing Committee, Assembly participants and all those who have come to this Opening Ceremony. On behalf of the Organizing Committee, may I express our heartfelt gratitude for this overwhelming kindness on the part of Your Royal Highness.

I beg on this occasion to report briefly to Your Royal Highness that the International Council on Education for Teaching is an independent organization established to promote academic and professional aspects of teaching. Its headquarters is located in Washington, D.C., U.S.A., and it has institutional and individual members in approximately sixty countries. The organization's major activity is an annual academic conference which is held on a rotating basis in different regions of the world, namely America, Asia, Africa, and Europe. This year's Assembly will afford educators from member countries the opportunity to exchange views and increase their awareness of new methods useful in the development of teacher training and the provision of more effective education.

This year Sukhothai Thammathirat Open University has been invited to serve as host of the ICET World Assembly, which has as its theme "Innovations in Teacher Education: The Pursuit of Excellence."

The University, as host, has received outstanding support and cooperation from the Ministry of University Affairs, the Department of Teacher Education, the Office of the National Education Commission, the Teachers Council of Thailand, the Education Society of Thailand, Phi Delta Kappa, Thailand Chapter, the Thailand Association of School Administrators, and the Council of the Deans of Education of Thailand.

Approximately six hundred academics and educators from at least fifty countries throughout the world are attending this World Assembly, including approximately four hundred academics and educators from various agencies in Thailand.

At this time I respectfully request that Your Royal Highness deliver the Assembly's Inaugural Address in order to bring everlasting good fortune to all the participants.

For the gracious consideration of Your Royal Highness.

INAUGURAL ADDRESS

H.R.H. Princess Mana Chakri Sirindhorn
Kingdom of Thailand

ICET Trustees,
ICET Directors,
Distinguished Participants,
Ladies and Gentlemen:

It is my pleasure to come to this Opening Ceremony of the Thirty-First World Assembly of the International Council on Education for Teaching. I would like to offer my congratulations to all those who have received the Distinguished Fellow Awards as a testimony to their dedicated efforts in the field of education for the benefit of the people in their respective countries.

The International Council on Education for Teaching has an important role in promoting the development of teacher education in countries throughout the world.

This Thirty-First ICET World Assembly, now being held for the first time in Thailand, will enable those responsible for the provision of education to have access to new and modern principles and put them into practice.

I sincerely hope that the knowledge, capabilities, and experience of all the distinguished participants assembled here will make a significant contribution to the advancement of teacher education throughout the world.

The appropriate moment has arrived. I therefore declare open this Thirty-First ICET World Assembly. May all the participants enjoy and benefit from this conference.

INTRODUCTION

INNOVATIONS IN TEACHER EDUCATION: THE PURSUIT OF EXCELLENCE

Wichit Srisa-an
Deputy Permanent Secretary for University Affairs
Ministry of University Affairs, and
Rector, Sukhothai Thammathirat Open University
Bangkok, Thailand

During the meeting of the ICET Board of Directors last year in Washington, D.C., after STOU had agreed to act as host of the Thirty-First World Assembly, there was considerable discussion about the theme of the 1984 Assembly. As host of this Assembly, I was asked by ICET to take part in these deliberations. Choosing a theme for an annual academic conference such as the ICET World Assembly is clearly not an easy matter. In fact, it seems to be harder than serving as host of the conference itself. This is because ICET has a World Assembly each year. The subject matter that is chosen as the theme must be in the nature of a global problem since ICET has members in every region of the world. It must be a topic which has never before been used as a theme, or, if it has been previously used, it must be sufficiently removed in time from the theme of that previous Assembly. It must be concerned with education for teaching which is the target area of ICET. And most important of all, it must be a topic which ICET members are interested in. Otherwise there won't be enough participants for the conference to live up to its name of a World Assembly. After considering many possible themes in accord with the criteria just mentioned, we finally decided on "Innovations in Teacher Education: The Pursuit of Excellence." Both ICET and the host were satisfied with this theme because there were two words -- the key words of the theme -- that we liked very much, even though we weren't quite sure exactly what they meant. These words are "innovations" and "excellence."

When we had finally agreed on the theme for the Thirty-First ICET World Assembly, the next step was selecting the topics for five days of discussion that would conform to the theme. Before doing this, however, we spent considerable time trying to define the word "innovations." Finally, we agreed that we would use the following working definition of "innovation" for this World Assembly.

> Innovation is taken to mean an ongoing activity or practice which is new and which is being implemented in a teacher education system, having a potential for transfer to other settings.

Within the framework of this definition five innovative areas were chosen as topics for the Assembly, namely:

1. Innovations in Preservice Teacher Education

2. Innovations in Inservice Teacher Education

3. Innovations in Educational Technology

4. Innovations in Distance Teaching

5. Innovations in Regional and International Cooperation

This past decade could be considered the decade of educational reform. The provision of education in various countries throughout the world was criticized for failing to respond to the needs of societies that were rapidly changing. It was attacked as inefficient, inferior in quality, and not sufficiently development oriented for the modern world. Commissions were set up to seriously study, analyze, and offer guidelines for educational reform. Reports dealing with educational reform appeared at both the national and the regional level, the latter of course dealing with matters international in scope. In this region, Southeast Asia, major educational reforms took place in such countries as Singapore and Thailand. At the regional level, the Association of South East Asian Nations (ASEAN) initiated a cooperative project to make education more development oriented. Whenever there is educational reform, the matter of teacher education is inevitably an important component and there are always proposals for reform in this area. One clear example of this appears in the report of the National Commission on Excellence in Education of the United States of America entitled, "A Nation at Risk," which points out the following:

> The Commission found that not enough of the academically able students are being attracted to teaching; that teacher preparation programs need substantial improvement . . . Too many teachers are being drawn from the bottom quarter of graduating high school and college students. . . The teacher preparation curriculum is weighted heavily with courses in educational methods, at the expense of subjects to be taught.(1, p. 22)

This Commission proposed reform in teacher training, emphasizing the following:

> Persons preparing to teach should be required to meet high educational standards, to demonstrate an aptitude for teaching, and to demonstrate competence in an academic discipline. Colleges and universities offering teacher preparation programs should be judged by how well their graduates meet these criteria.(1, p. 30)

Regardless of whether this analysis is valid, at the very least it does call our attention to the critical problem of teacher education and illustrates how the same problem exists in many different countries.

Another example of education reform is the cooperative project known as the ASEAN Development Education Project (ADEP). One of the five components of this Project concerns teacher education reform. The five ASEAN countries -- Indonesia, Malaysia, the Philippines, Singapore, and Thailand -- agree on the following points:

1. Teacher education has a key role to play in improving the quality and relevance of education at all levels. Changes in curricula in accordance with the needs of development education cannot be successfully implemented without appropriately trained and competent teachers to adapt to new challenges. At present all five ASEAN member countries expend tremendous resources on inservice teacher education programmes with somewhat uncertain effectiveness, and with little end in sight of teachers that need to be retrained or updated.

2. This situation demands a closer look into preservice teacher education to find out if anything could be done to ensure that teachers will continue to learn and grow in professional competency in accordance with the new economic and social changes of the times.

3. It is realized that very little attention has been given to the preparation of teacher educators or to reorient existing teacher educators to redirect their efforts to improve their training capabilities. There is now an urgent need to review existing teacher education programmes and seek better and more efficient methods and strategies relevant to ASEAN educational values and goals.(2)

It is generally accepted that the quality of the people is an important factor in the development of a country. And the quality of the people depends on the quality and effectiveness of the education provided. This, in turn, is likely to depend on the quality of the teachers and the innovations employed in educational reform. Thus reform in teacher education must be emphasized, with importance attached both to the system and the process. In an age such as the present, in which there has been considerable progress both in the academic and the technological realms, more innovation and technological advance have been applied to the field of education than in any previous era. Thus it is most heartening that ICET has selected innovations in teacher education as the theme of this World Assembly. I firmly believe that the exchange of views and experiences related to the five areas of innovation that will be featured in this Thirty-First ICET World Assembly will lead to the educational excellence that we are all so earnestly pursuing.

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1. A Nation At Risk: The Imperative for Education Reform. Washington, D.C.: U.S. Government Printing Office, 1983.

2. Report of the First Meeting of ASEAN Ministers of Education, Manila, Philippines, December 1977.

INTRODUCTION

TEACHER EDUCATION IN THAILAND

Pote Sapianchai
Secretary-General
National Education Commission
Office of the Prime Minister
Bangkok, Thailand

It is now almost a century since teacher education has been formally organized in Thailand. In describing its development, it would be suitable to divide it into two periods: the initial period and the development plan period.

The Initial Period

The first teacher training school for men was opened in Bangkok in 1892 with an initial enrolment of three students. In later years, more students enrolled and new teacher training schools were set up. In order to attract more people into the profession, study grants were introduced, on condition that those who entered the Teacher Training School returned to their home province upon completion of the course. In the National Education Scheme of 1898, teacher education was given a high priority, but in the 1902 Scheme no specific provision was made for teacher training. In 1905 opportunities for unqualified teachers to take inservice courses leading to a Ministry examination and certification were developed with the creation of the Association of Teachers.

It was not until 1913 that the first women's teacher training school was opened. In 1915, the Ministry of Education proclaimed its intention to extend teacher education to the degree level, but the implementation of this scheme did not materialize until 1954. For example, when Chulalongkorn University began its first program of teacher training for secondary school teachers in 1928, its program was still at sub-degree level. Only 11 percent of the teaching force were certificated by 1927.

Training for elementary and kindergarten teachers began in 1943, and by 1946 five types of training institutes were opened. They offered different types of training varying from three years after grade 7, two and three years after grade 10, one and three years after grade 12 and two years after completion of a three-year course following grade 10.

In 1949, a new model school for training students was opened at Prasarnmitr Teacher Training College. Initially it offered a five-year course. Afternoon classes in the provinces were also arranged.

The year 1954 marked the turning point for teacher education in Thailand. In that year, Chulalongkorn University extended its one-year training program to two years leading to the B.Ed. degree. A Department of Teacher Training was set up in the Ministry of Education, and Prasarnmitr Teacher Training College was upgraded to a College of Education offering a four-year course in various disciplines, also leading to the B.Ed. degree. The progress of teacher education during this period depended on technical and financial assistance from UNESCO and foreign countries, together with contributions of Thai graduates from abroad under the Ministry of Education's support.

In 1972, the College of Education was given a status equivalent to a department within the Ministry of Education, but since 1974 it has been upgraded to the status of Srinakarinwirot University under the auspices of the Ministry of University Affairs. By the same year, seventeen teachers' colleges were authorized to award B.Ed. degrees.

The Development Plan Period

Teacher education has developed significantly during the last two decades of social and economic development. The dramatic population explosion during the first, second, and third National Development Plans, covering the period from 1967 to 1976, stimulated the Government to improve the educational system. Educational services at all levels were expanded, many new teachers' colleges were established, and the enrolment in teacher preparation increased. The accelerated production of teachers in both regular and evening programs attempted to cope with the increasing demand for teachers. After some time, the number of teachers exceeded the demand. The overproduction of teachers continued until the fourth National Development Plan in spite of attempts to reduce the number of teacher education students.

The Present Condition

According to the National Scheme of Education B.E.2520 (1977), the present school system introduced in 1978 has a 6:3:3 structure with six years of compulsory primary school. Teacher training institutions are organized at the tertiary level. Teacher education is the State's responsibility.

Objectives. As stated in the 1977 Scheme, teacher education aims at producing teachers who will be able to motivate students to seek knowledge and to discover the many dimensions of their own potential and aptitudes. Teachers shall be trained to be morally respectful individuals with tolerance and understanding toward their students. Their personalities and character should be in harmony with Thai culture and a constitutional monarchy.

Types of teacher training institution. There are presently some 111 state college and university campuses of teacher training under two ministries. Thirty-one of these are in Bangkok, whereas the remaining eighty are scattered throughout the country. Under the Ministry of Education, thirty-six teachers' colleges are under the Department of Teacher Education, forty-five colleges are attached to the Departments of Physical Education, Fine Arts, and Vocational Education, and the College of Technology and Vocational Education. A considerable number of teacher education programs are conducted by twenty campuses of ten university Faculties of Education, operating under the Ministry of University Affairs.

Teacher education programs. The programs being provided are of two types: non-degree and degree. A variety of non-degree programs have been conducted by the institutions under the Ministry of Education, mostly at the higher certificate or diploma levels. Some of them are the programs in Higher Certificate of Education, Certificate in Dramatic Art Education, Certificate in Fine Art Education, and Diploma in Agricultural Education. The degree programs at the undergraduate level are offered in various institutions. These include the two-year program after Higher Certificate of Education and a four-year program after grade 12 or Lower Certificate in Education. The College of Fine Arts, the College of Dramatic Arts, and the College of Technology and Vocational Education also produce bachelor degree graduates with majors in drama, arts, agricultural education and some other vocational areas. Universities offer only degree programs.

At the graduate level, the Master of Education programs are conducted by various Faculties of Education in a variety of specialized fields. This includes such areas as developmental psychology, educational administration, nonformal education, population education, environmental education, educational research, and educational measurement and evaluation. Doctoral programs in education are offered in some universities. Srinakarinwirot University runs doctoral programs in development education and curriculum research and development. Chulalongkorn University is conducting programs in educational psychology, curriculum and instruction, and educational measurement.

Number of students. The highest number of new entrants in teacher training institutions was about 41,000 in 1981, about 30,000 of whom were in non-degree programs. This year the nunber has declined to about 37,000 with about 26,000 new entrants in non-degree programs.

Number of teacher graduates and employment. Only a small proportion of teacher graduates get a teaching post. While some 49,000 teacher students graduated in 1983, only about 10,000 teaching posts in the Ministry of Education were recruited for. Due to the government policy of freezing employment during the last few years, the level of teacher employment has dramatically declined as the government is the major employer. The recruitment of new teachers dropped from 28,000 in 1981 to 10,000 in 1983. The estimation of the Fifth Development Plan (1982-1986) indicates the number of teacher graduates in non-degree and degree programs as exceeding demand by 77,000 and 55,000 respectively.

Cost of teacher education development. During the Fifth Development Plan the estimated cost for teacher education is about 5,000 million baht. It constitutes 2.46 percent of the total education development cost.

Curriculum. Two ministries are authorized to look after the implementation of teacher education curriculum. Degree programs need approval of the Ministry of University Affairs. The non-degree programs being offered in the teachers' colleges have to be approved by the Curriculum Committee of the Department of Educational Techniques, with the Education Minister's consent. An analysis of teacher education curriculum shows that a considerable proportion of the curriculum is comprised of professional education courses. The non-degree progams consist of the required area of general education courses, specialized courses, and professional courses. Professional courses comprise twenty credits out of the total of seventy.

In degree programs, the total credits and credits for professional courses required vary from institution to institution. For instance, the B.Ed. degree requirement of the teachers' colleges is about 140-146 credits with 42 professional education credits. Most of the universities require 145 credits for graduation. Slightly more than one third of these credits are in professional education courses. In addition, the total credits required for an M.Ed. degree is 44-48, with 21-30 for professional courses, 9-15 for general subjects and 6-12 for a thesis.

Major Problems

Educators have encountered several problems:

1. Because of the diversified system of teacher education administration, the control of teacher production in terms of demand is improbable;
2. The excessive number of teacher training institutions is underutilized as the demand for teachers countinues to decline;
3. There is an overproduction of teachers of general subjects whereas specialized teachers are in short supply;
4. The ineffective rotation system has caused an uneven distribution of teacher educators;
5. Teaching is not fully recognized as a profession as are medicine and engineering, since a teaching license is not required for a teacher;
6. Teacher education curriculum does not articulate with the primary and secondary curriculum. While the former aims to produce teachers of major and minor subjects, the latter prefers a well-rounded teacher;
7. The study of teaching and learning processes is theory-oriented rather than practice-oriented;
8. Brilliant students with positive attitudes toward and belief in the teaching profession are not likely to be admitted to teacher education institutions because of the existing selection criteria for teacher students;
9. There is a lack of systematic and continuing evaluation of teacher education programs.

Future Trends

Apart from attempts to solve the aforementioned problems, the trends in teacher education may be dealt with in several ways.

1. The production of teachers has to be reduced. As in other countries, teacher education in Thailand is vulnerable to demographic change. The declining number of students, especially at the primary level, resulting from the declining population growth rate, has reduced the demand for teachers.

2. In order to fully utilize existing resources, the present teachers' colleges will sooner or later be changed into community colleges or other types of colleges of various disciplines. Currently, the Ministry of Education has been attempting to adjust the Teacher College Act of 1975 to modify the present function of teachers' colleges. According to this Act, the teachers' colleges cannot conduct programs other than teacher education.

3. To improve teacher quality, curriculum will be continually revised putting more emphasis on specialized areas. Coupled with this endeavor, more specialized teachers have to be produced to cope with the demand.

4. The imbalance between the number of teacher graduates and employment demand will force teacher graduates to take any kind of job other than teaching. This trend is strengthened by the fact that they are prepared for several kinds of jobs as a result of diversified teacher curricula. Accordingly, teacher training institutions have to offer placement services for their students to make sure that more of their graduates get jobs.

Conclusion

Since its establishment almost a century ago, teacher education in Thailand has developed to suit the demand for it and the fincncial condition of the country. The past two decades yielded remarkable progress in teacher education in Thailand. Attempts were made in several ways: nationwide expansion of teachers' colleges, curriculum revision, quality improvement, upgrading of teacher education program levels and institutions. Lessons learned from past experience tell us that the present pattern of teacher education will definitely be adjusted to the benefit of students and Country.

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SECTION I

Innovations in Preservice Education

TEACHER EDUCATION IN ASIA AND THE PACIFIC:
ACCENT ON INNOVATION

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Wide ranging socio-economic changes are a most distinctive phenomenon of the past several decades in this region. They are interacting with technological change as well as with innovations in educational structures and practices. The Asia-Pacific region, noted for its diversity, is undergoing developments in all spheres of public life, at a rate and scale unequalled in the rest of the world.

The national educational systems in the region are also undergoing a variety of reforms. In many cases, national educational reforms are taking the form of a total, if not revolutionary, renewal. In others, the intention has been to adapt the existing system to changes in the socio-economic and cultural environment as harmoniously as possible on the basis of carefully evaluated pedagogical experience.

Life in the classroom has changed in keeping with these reforms. Individual group work is given increased importance. Self educational processes including self evaluation are more common, and the creative abilities of students are being developed. The emerging direction of teacher education reform in Asia and the Pacific is seen in this transformed context.

Preparing Teachers in the Context of Change

Teacher education plays a crucial role of achieving the educational goals of nations. It has to assume new roles both in improving learning and in supporting development. These roles imply development of new professional skills (e.g., in teaching-learning programs for deprived and disadvantaged population groups); development of a broader knowledge base (e.g., in teaching-learning programs related to new areas such as population, environment, agriculture); and development of new attitudes and values (e.g., those called for in community participation in development).

Preservice education. In preservice education, the countries of this region regard it as absolutely essential that prospective teachers are made aware of these new roles and of changes taking place in society. This underlines particularly the importance of developing the personality of teachers and their readiness and capacity for further training and self education. Preservice education should enable the prospective teacher to acquire professional preparation for new development roles, and it should provide a basis for continuing professional development in the context of these roles.

With respect to general principles and aims, the preservice education programs in the region are undergoing changes to achieve the following.

1. to relate more closely to new roles expected of teachers today and to prepare them not only for instructional roles but also for the variety of other roles required of them by their country's development objectives. Teachers are now more involved in various extra-curricular and out-of-school activities and are being prepared so that they will be able to combine classroom experiences with the child's general, out-of-school up-bringing;
2. to provide the opportunity for student teachers to experience new roles during their training period, to give them experiences in the administration of teacher education institutions, and to provide practical training so as to develop their resourcefulness and adaptability to change;
3. to ensure the student teachers' personal and professional self-development capability, so that they will be able to continue their education either by self-education or by attending inservice training courses;
4. to include adequate provision for general, professional, theoretical, and practical preparation. Studies in the field of specialization should be up-to-date and interdisciplinary in character and cover not only the facts but also fundamental concepts, principles and structures of subjects so that students acquire an interdisciplinary framework within which they can continue to gain new knowledge independently during their professional life, taking account of the latest developments in the field of their specialization;
5. to include ample provision for professional development, both theoretical and practical, including an introduction to problems of educational research and its application, so as to facilitate teacher participation in educational research and to strengthen the links between training and research;
6. to prepare teachers to use educational technology effectively.

Inservice education. In their efforts to improve the quality of education, the countries of the region have continued to develop inservice training suited to their specific situations. The types of inservice education programs undertaken by the countries are as varied and diverse as the nature of the agencies concerned.

Inservice training is mostly undertaken a) to update the qualifications of those who entered the profession at a time of lower standards, b) update the knowledge and renew the competence of teachers so that they may keep up with the development of their profession and the needs of pupils, and c) provide refresher training to people returning from a period of absence from teaching. Inservice education is also undertaken to impart to teachers the knowledge, skills and attitudes which are necessary in the light of changing national development goals and educational priorities, to make teachers more aware of the problems of their communities, and to develop the skills and attitudes needed for them to become active change agents in the community.

For new teachers entering the school system, teacher education is a continuous or recurrent process, of which preservice education is only the initial phase. The latter phases -- periods of inservice education -- should be pursued with the active collaboration of the profession itself, which has both the collective responsibility and the ability to identify needs and prescribe methods.

Inservice education is considered as an integral part of the teacher education process and therefore in most of the countries, inservice training is arranged on a regular basis. In this context, the functions of teacher education institutions are being extended not only to provide for the preservice education of teachers but also to contribute substantially towards their further education.

Self education by teachers is currently considered as an important element in their continuing education. The educational authorities and educational research and resource centres of the countries have been helping teachers to organize their individual inservice education through guidance, the provision of materials and facilities, and by making the necessary time available.

In order to make continuing education more effective and to reach teachers and other educational personnel in remote areas, extensive use is being made of distance education programs. The combination of short, full-time courses with longer periods of multi-media programs using correspondence education, educational broadcasting, video-education and audiocassettes, may provide one solution to the inservice education of the broad mass of teachers.

Links are being established between the teacher training institutions, curriculum development centres, resource centres of different types, and educational planning and management centres. These facilities and expertise are made available for the professional growth of teachers in the areas of management innovation, education for disadvantaged groups, rural development, productive skills development, and improvement of health and nutrition.

Educational Goals and Teacher Education Strategies

Several types of educational innovations are being undertaken in the countries of the region. The areas of emphasis are teaching educationally disadvantaged groups, improving the relevance of teacher preparation to learner needs, and new educational technologies.

Coping with learning problems of disadvantaged groups. Most of the developing countries of the region are deeply concerned about both universalizing primary education and enhancing the quality of education. This has led to a search for alternative teacher education programs, particularly to cope with disadvantaged groups. Some of the initiatives are: inclusion of new subjects like "Education and Development", and "Working with the Community" in the teacher education curricula; creation in teacher education institutions of a mechanism for a continuous self-assessment of instruction, research and extension service capabilities and program thrusts; changes in the curriculum of teachers to ensure that they enable children to attain mastery of basic subjects and take on desired values; integration of theory and practice, and provision of field-based experiences in teacher education programs; introduction of courses to meet the needs of special population groups, like girls and women, and children of remote and rural areas; and initiation of specialist programs in areas such as remedial education, language, counselling, library science and guidance.

Catering for a variety of needs. The approach to teacher education is viewed comprehensively in terms of achieving equal educational opportunity and those higher values that improve the relationship between and among teachers and learners, the process of education, and achievement in education.

In several of the new programs of teacher preparation, there is an emphasis on:

1. the role of the teacher as a development agent and as a community leader working as a member of a team of development agents in an area;
2. identifying and organizing learning resources derived from a variety of sources and on linking the school through the teaching/learning process with the life of the community;
3. cultivating knowledge of development processes, of economic and social problems, of non-formal and other modes of education and of community participation and mobilization;
4. ensuring that teacher trainees are in direct contact with the milieu in which they will work and that training is conducted in real life situations;

5. preparing teachers for a wide range of skills and competencies.

New educational technologies. Perhaps the most notable current trend is the growing use of advanced technologies and the rapid expansion of the activities in which the UNESCO Regional Office has been involved; fairly extensive materials and a few useful manuals have been developed in the past few years. These relate to teacher preparation for the several levels and for various types of education.

The rapid rate of change of technological development makes it difficult to make accurate predictions for the future. This is particularly true in the area of micro-electronics. Nevertheless, an important beginning has been made, and several activities have been planned for the years 1984-85. These include an international symposium planned in 1985 to examine the fields in education where information can be applied and to study the present state of the art in various countries in the use of computers in education.

Emerging Directions

The various innovative projects and practices discussed above reflect important trends in teacher education:

> Future orientation. Incorporating a futures orientation will address contemporary issues, projected trends, and the relationship of the present to alternative futures.
>
> Computers and other information technologies. Incorporating computers and other information technologies as a meaningful part of and vehicle for the education of all people; developing a comprehensive plan for the appropriate uses of technology, including a computer literacy program.
>
> Satellite communication and other communication technologies. Considering their relevance to and potential for education.
>
> Learning and work interpretation. Ensuring that work and career education reflect personal aspirations and the changing concepts of work and learning.
>
> Values, emotion and creativity dimensions. Placing greater emphasis in the educational process on building moral and ethical values and creativity. This should lead to the development of positive self-images and interpersonal relationships.
>
> Staff development and training. Increasing opportunities for staff development and training, particularly in the area of new technologies, participatory research, and interdisciplinary teaching methods and techniques.

PRESERVICE EDUCATION

Development of mutual learning units for students, parents, teachers and community members. Developing the relationships among students, parents, teachers and community members to foster mutual learning modes.

A redesign of present educational systems may be needed if they are to be more effective in policy development for the long term and still retain their capacity to cope with the present. Since it is unlikely that there will be major increases in resources for education, education systems will clearly need to make better use of current human and material resources. The redesign of educational systems may require also a radical restructuring of the pattern of teacher education itself.

Cooperation in the sphere of preservice and inservice teacher education, educational technology, distance learning and teaching material, and international dimensions in teacher education, has been intensively promoted in the region since 1974 within the framework of the Asian Programme of Educational Innovation for Development. As of today, twenty-four countries and over 150 of their premiere research and development centres form a network engaged in the exchange of experiences and cooperative development of individual countries' capacities for designing and introducing innovations. A notable development of the recent past is the establishment of a parallel network of institutions for the promotion of the innovative capacities of the countries of the region in the domain of higher education. Other regional programs supplementing the work of these networks have been active, and more are envisaged.

INNOVATIONS IN PRESERVICE TEACHER EDUCATION: PANELIST'S COMMENTS

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I agree with Dr. Latif about the importance of communication and the exchange of information, customs and traditions. I would add that it is important also that we develop understandings of each country's educational system, its foundations as well as its goals and objectives. It would help, also, if we became increasingly aware of what we are all experiencing in terms of problems and efforts being made to improve education.

The speaker was correct, I believe, in noting the changes in society that are forcing changes in education. This seems to be a common thread around the world. The literature is replete today with the effort of various educational systems throughout the world responding and gearing up to anticipated greater needs for education brought about by increased expectations of citizens as well as increasing technology in so many countries.

Another thread that seems to be running through educational systems in Asia and the Pacific as well as in the United States is the importance of field and laboratory experiences. One of the difficulties that we need to recognize, however, is the temptation to overdo this important concept. If we relegate teacher preparation to the status of a craft, we will have done a disservice, even though our intentions were noble.

Inservice education is of greater importance today than ever before. Many political and business leaders either do not understand or do not appreciate fully the admonition of the late Paul Mort who reminded us that "tomorrow's teachers are already on the job." Thus, the emphasis of improving initial preparation programs will have only a long term impact, and short term needs must be achieved by teachers now in service.

The role being prescribed for the teacher, as commented upon by Dr. Latif, is an accurate one, I believe. It is a very demanding and challenging one. It is entirely possible -- and I hate to sound pessimistic -- that it is beyond the capability of teacher preparation institutions. I can speak more comfortably in this assertion with reference to the United States. One of the problems that we all experience is that we have allowed the general public to believe that an initial teacher program prepares master teachers. They do not. They prepare people who are safe risks to enter the profession who over a period of time might develop into master teachers, or at least into fully satisfactory ones. We simply do not have the facilities, the power, or the control necessary to assure the public that our graduates are at a highly developed level of competence. This should not be construed to mean that teacher preparation is not important or effective but simply that it is limited -- as is the case in all preparation programs.

Teacher education must always be sensitive to and synchronized with the demands being placed upon the schools. As schools become more heavily burdened with expectations from the various publics, it will be increasingly difficult for them to perform up to levels of expectation. Similarily, it will be difficult for teacher education programs to produce teachers capable of responding fully to these increased expectations and demands. The most troublesome part of this is the maintenance of quality in preparation programs, expecially in view of the other goals and objectives that various countries have, such as accomodating civil right objectives, and human rights needs.

I want to stress several areas of potential conflict in our continuing efforts to improve the quality of teacher education programs. We spend a great deal of time talking about innovations and different approaches. Indeed, the title of this session is "Innovations in Preservice Teacher Education." My fear is that in our efforts to be spectacular and innovative, we run the risk of causing many of our publics to feel that this is the reason that schools are in trouble now, that is, too much deviation from the "tried and true," the basic and fundamental work. It may be that we need to find ways to use less exotic and more understandable and credible terms as we describe different approaches in the preparation of teachers.

A second fear in this same vein is the diversity of approaches. While there is no one best way to do anything, perhaps, and certainly no one best way to prepare teachers, it must also be true that there is a finite number of approaches that are workable and defensible. It bothers me that we seem to be diverging more than converging. I would hope that by this time in the history of teacher preparation we would have learned enough through research and practice that we would have a body of best practices and knowledge to use which would cause teacher education programs, wherever they are, to look alike in some respects.

Another potential conflict has to do with whether or not we are willing to make the commitments necessary to really improve education. For example, there is a clear movement in the United States to consider a program for compensating teachers on the basis of performance. This is a highly controversial concept. The conflict seems to be that the people who finance education -- the taxpayers -- think it is a good idea and those who practice education -- teachers -- are opposed to it. I suspect it will be years before there is reasonably good consensus on this matter.

RECENT INNOVATIONS OF CHINA'S TEACHER EDUCATION: PANELIST'S COMMENTS

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More than two thousand years ago, Hue-Ji, the first special book on learning, was recorded to have said: "Kings of the past built their kingdoms and ruled their people by putting learning in the first place . . . Become teachers, so you could become olders; become olders, so you could become rulers." Thereafter, the maxim: "Heaven-Earth-Ruler-Parents-Teachers" has become a tradition, putting teachers on a par with kings and parents. China has long held teachers in esteem, and the social status of teachers had been quite high. But in the ancient days, education was carried on in old-style private schools by individualized instruction. The initial growth of national capitalism gradually exposed the inadequacy of the old educational forms in meeting the need for training qualified youth. Thus there arose a movement to discard the traditional imperial examinations, and to establish new schools in order to train qualified persons. But for the purpose of opening new schools, the fundamental problem was to have enough new teachers. Therefore, toward the late nineteenth century, the far-sighted leaders of the government realized that they must establish teachers schools to produce qualified teachers. It was said that, "if we want to eliminate the old habits, and promote intellectual education, we must put the establishment of teachers schools in the first place." In 1897 Nanyang Teachers School was founded in Shanghai. Thus, teacher education in China has a history of only about eighty years.

In the last eighty years, teacher education has followed a zigzag road of development. Before the founding of the New China, the corrupted and incompetent governments of the old regimes had put education at a standstill. On October 1, 1949, the People's Republic of China was founded, and teacher education regained its life. The leaders of the Communist Party of China and the central government have put great emphasis on teacher education and equated it to heavy industry in its importance for national development. Teacher education was seen as the foundation of development and the central link in the whole educational enterprise.

Since then, teacher education has developed very rapidly. There were only twelve teachers colleges in 1949, while in 1981 there were more than 190 institutions in this specialized field. In 1949, there were 610 secondary teachers schools, while in 1981 the number of such schools stood at more than one thousand. From 1949 to 1981, the graduates of teachers colleges and two-year specialized teachers' colleges had had a total of 826,000, or 25 percent of college graduates; the secondary teachers school graduates totalled 2,934,000, or 46 percent of the total number at this level. Altogether, about 4,000,000 graduates of all levels of teachers schools became qualified teachers in our elementary and middle schools.

In the last thirty-five years of the New China, teacher education has made great achievements. But there still exist many difficulties to be overcome and many new problems to be solved. The "ten-year disaster" dealt an especially terrible blow at teacher education, both materially and spiritually. Its impact on teacher education was very serious. As a result, teacher training institutions could not develop quantitatively and qualitatively to cope with the challenging problems facing the building of the four modernizations (science and technology, agriculture, defense, and education). Since 1978, both the Party and the state have called upon educational workers and all levels of government to emphasize, heart and soul, the reform of teacher education. Teacher education has been pushed to the forefront, and has been placed on the agenda for serious consideration

Comrade Teng Hsioa-Ping, Chairman of the Advisory Committee of the Party has declared that education "should face the four modernizations, face the world, and face the future." This strategic call provides a clear orientation for the reform of teacher education in China. In order to achieve the four modernizations, teacher education must train enough highly qualified teachers. In order to face the world, teacher education must meet the developing needs for international communications, open up the channels of international cultural contacts, and learn about scientific achievements and teacher education experience in other countries. In order to face the future, teacher education must adapt its work to the needs of rapid economic growth and educational development in China. Teacher education must endeavor to train enough personnel for the beginning of the twenty-first century. Teacher educators are making use of the historical experience of teacher education under the guiding thought of Marxism-Leninism-Mao Tsetung Thought. With this perspective as the fundamental orientation, and on the basis of the concrete realities of the present, they are moving step by step along the road to reform in teacher education.

The following is a description of seven areas in which reform in teacher education has been taking place since 1978.

The Status of Teachers

In implementing the Party's policies toward teachers so as to reinstill a sincere social atmosphere of respect, teachers are considered as the propagators of human knowledge, the developers of student intelligence, and the counselors of youth -- in short, the hard-working gardeners of myriad little human flowers. The work of a teacher is considered glorious and a great and life-dedicating cause. We are accustomed to address teachers as "the engineers of the human soul." As the base for the training of future teachers, teacher education must be effective in the implementation of the Party's policies toward teachers, in orienting the thinking of the masses correctly regarding teachers, and in promoting a genuine social atmosphere of respect for teachers. Only in this way is it possible to lay a solid foundation for the success of teacher education.

Directed at the groundless attacks and slanders by Lin Biao and the "Gang of Four" against teachers and teacher education, our Party and government, since 1978, have taken a series of effective measures to "put the disordered things in good order."

First, a series of conferences were called: the National Science Conference, the National Education Conference, and the Teacher Education Working Conference. In those important conferences and on other occasions it was formally proclaimed that the intelligensia, including all the teachers, are proletarian intellectuals, are the relying force of the Party, and are the masters of the country. They are given the honor to run education well in order to develop young people who are morally, intellectually, and physically well rounded laborers. Given the need to raise the political and social status of teachers, a great number of unjust, false, and erroneous judgements made in previous political movements were reversed.

Secondly, to raise substantially the political and social status and material rewards of teachers, a great number of distinguished teachers were honorably elected to be representatives of the people, or advanced workers, attending the People's congresses, political consultative conferences, model workers conferences, or taking political positions in the government to participate in the administration of the country. Many successful teachers in charge of classes were conferred medals or prizes with high honors. Since 1977, the salaries were adjusted three times and different subsidies were duly given so that the subsistence of teachers has been somewhat improved. In Fujian, beginning from 1982 more than five thousand teachers were honored as provincial, regional, or county labor heroes or advanced workers. More than ten thousand teachers were promoted to leadership positions. Many counties and communes have enacted legislation to protect the privileges and interests of teachers, liberating them from livelihood worries so as to dedicate themselves wholeheartedly to their work in teaching and training young people. Due to these measures, the correct policies of the Party and the government have been implemented. A genuine social atmosphere of respect for teachers has gradually come into being, and the development of teacher education has been spiritually and materially supported.

The Purposes of Teacher Education

China's fundamental task at all levels of teacher education is to train qualified secondary and primary school teachers with all-round moral, intellectual and physical development. In 1980, General Secretary of the Party Central Committee Hu Yaobang, in his talk to teachers' representatives at the National Teacher Education Working Conference, suggested three requirements for a good teacher: (1) a comparatively broad realm of knowledge, (2) serious study and mastery of the science of education and educational laws, and (3) a noble moral quality and high spiritual state of mind. These three requirements summarize the objectives of teacher training and the orientation of teacher institutions in China. Fully explicating the essential characteristics of teacher training institutions in China, the graduates of socialist teachers colleges and schools should know not only how to teach from books, but also how to educate pupils. Only when teacher training institutions closely adhere to these three requisites can they achieve the honorable designation of "engineers of the human soul" given them by the people.

In the past few years, a number of development trends have emerged among the different levels of teacher training institutions in order to achieve a deeper understanding of the fundamental tasks of teacher education and a more persistent adherence to the correct orientation to running teacher training institutions.

1. Stress on the important functions of teacher education in the building of socialist culture. This trend includes efforts to strengthen education in terms of the essential principles of Marxism-Leninism, of teaching the four cardinal principles, and of teaching revolutionary theory and communist morality. In this way, students would understand that teaching means not merely doing a job but training the builders of the four modernizations, yielding a new generation of socialists and communists.

2. Extension of discussions of the special characteristics of teacher education. More people are being led to understand the unity of the "academic side" and the "teacher education side" and are emphasizing the importance of recognizing the special characteristics of teacher education. Teacher training institutions are run well when there is recognition of the importance of the pedagogical dimension of teacher education.

3. Involvement with schools. Based upon the special demands of educational popularization, and enhancing the understanding of the realities of secondary and primary schools, there is emphasis on the importance for teachers colleges and schools to work closely with secondary and primary schools, and to be of service to them regularly.

4. Education in rural areas. Based upon China's population distribution (80 percent of the people are in the countryside), rural schools are in great need. In some parts of the country, teachers colleges and schools have tried to become more relevant to the needs of the community. In considering the admission of students and the assignment of graduates as well as the making of curricular changes, more attention has been paid to the needs of the community.

5. Multipurpose institutions. Single-purpose teacher training institutions suit our national condition. We have affirmed the experience of the fixed-orientation type of teacher education. But concurrently, we are including experimentation with the non-fixed orientation type of teacher education. Recently, some comprehensive universities are starting to share the responsibility for teacher training, so as to build a multi-channeled network of teacher training.

The Development Process

China is a country with more than a thousand million people, a vast expanse of territory, and rich natural resources. For historical reasons, her national economy, science and technology, culture, and education are still not fully developed. Since the founding of the New China, the development of the economic aspect has been progressing side by side with the development of educational affairs, especially the development of teacher education.

However, the weakness of her foundation, especially the destructive impact of the "ten year disaster" make it impossible for teachers colleges and schools to cope with the pressing needs of the four modernizations, the popularization of primary education, and the development of secondary education. Therefore, the reform of China's teacher education system to meet the needs of her further development has become the focal point in pushing forward educational enterprises.

In reforming the teacher education system, we start from the actual situation of the country, summarize our experience in teacher education in the past, and learn from abroad the positive experience and negative lessons of other countries. In this way we are setting up a teacher education system adapted to China's national situation and her national characteristics. The following are a number of elements of this effort.

1. Adapting to the developing needs of local educational enterprises. Besides the effort of developing the six comprehensive teachers universities under the direct guidance of the Ministry of Education, each province (autonomous region) should have one or several teachers colleges or universities to prepare senior middle school teachers. In addition, each well developed region should build one or several two-year or three-year teachers colleges to prepare junior middle school teachers, and each county should run an independent teacher school or cooperative with neighboring counties to run a teacher school to prepare primary school and kindergarten teachers. Thus, China is developing a sound teacher education system to prepare teachers for senior and junior middle schools, primary schools and kindergartens.

2. Establishing specialized teachers colleges and schools. Following the development of structural reform in secondary education, a great number of secondary vocational schools have sprung up. The teachers trained by general teachers colleges and schools can not meet the needs of vocational schools. Consequently, in many regions, specialized teacher training institutions were founded as well as some specialized teacher training departments in general universities. These were organized to train teachers for vocational schools, technical schools and other types of specialized secondary schools.

3. Establishing national minority teacher training schools and special education teacher training schools. In the last few years, national minorities teacher training schools were established to train teachers for areas inhabited by national minorities. Also, in some provinces, municipalities, and autonomous regions, classes to train teachers for hearing and vision impaired students were organized.

4. Organizing networks for the retraining of secondary and primary school teachers. Education colleges and retraining colleges were established in the provincial capitals and districts. Retraining schools were also established in the counties. The division of labor among them allows education colleges in the provincial capitals to be responsible for the retraining of school administrators or senior middle school teachers, the retraining colleges in districts to be responsible for the retraining of junior middle school administrators or teachers, and county retraining schools to be responsible for the retraining of primary school and kindergarten administrators or teachers.

In the past few years, through the above mentioned four channels, a multi-staged and multi-channeled system of teacher education has been gradually established and is fundamentally adapted to the needs of secondary, primary and pre-school education.

Along with the rapid development of educational programs in China, raising the academic level of the teachers in teacher colleges and universities has been placed on the agenda. Many teachers colleges and universities are admitting graduate students, running graduate classes, and creating conditions to run graduate schools so that gradually more and more teachers in teachers colleges and universities will have Masters or higher degrees. In this way, teacher education will become a four-stage structure: graduate school, four-year teachers college, two-year teachers college and secondary teachers school.

The different levels of teachers institutions have also lengthened the course of study. The secondary teacher school program has been lengthened from three to four years and some teachers colleges from four to five years. For the purpose of adapting themselves to the developing needs of the four modernizations, some scholars suggest that a few years later the length of secondary teachers school and of the teachers college should be five years, and the length of the two-year teachers college should be changed to four years.

The Content of Teacher Education

Raising the quality of instruction is a matter of paramount importance in the reform of China's teacher education. This could be accomplished by starting the reforms in curriculum, content, and methods of teaching, centering around the training of future teachers. This emphasizes the training of not only the propagators of knowledge, but also the developers of competence, and the carvers of human qualities. For this reason, any reform should include the correct handling of the relationships between intellectual and moral education, as well as physical education. The graduates of teacher training institutions should not only adapt themselves to the rapid development of science, technology, and culture in the world, but also provide the fundamental education of the people.

As to the changes in curricular offerings, content of training programs, and methods of teaching, it is impossible to discuss them here in detail. However, three important problems are identified below.

1. Strengthening professional training. Education is both science and art. A qualified teacher must have a comparatively broad knowledge, but also have a good mastery of educational principles. Consequently, it is necessary to strengthen professional training. In the 1950's, the total number of courses in education occupied 17.3 percent of the curriculum, and there were twelve weeks for educational practice. Thereafter, due to the influence of various factors, professional training in education has been on the decline. Courses in education have been cut down to occupy only 5 percent and the time given to education practice has been cut down to six weeks. Recently, this weakness has attracted the attention of many leaders, and the move to change the situation has been progressing. The current tendency is to increase the teaching hours of educational theory and educational practice, to encourage more frequent contacts between teachers colleges and secondary schools, and to give more attention to training in teaching abilities and techniques.

2. Reforming the contents of teaching material. Under the force of "knowledge explosions" and new technology, the reform of the content of teaching in teacher education is imminent. The main points of reform are: (a) to strengthen the study of the foundations of educational theory and techniques; (b) to renew the system of scientific knowledge; (c) to compress the content of classical material in order to enrich the content with new achievements of scientific research; and (d) to stress the combination of theory with practice, especially with actual situations in schools, so as to establish a better

connection between the knowledge taught in different levels of schools. At the same time, more elective courses are to be offered introducing newly emerging fields of knowledge and giving attention to the interrelationships among different fields of knowledge.

3. Reforming methods of teaching. The purpose of teacher education is to train teachers of the future. It must pay special attention to the science of teaching and to the development of students' abilities. For many years, all levels of teacher education in China have been emphasizing our own teaching experience, and the successful teaching achievements from abroad. The introduction of new technologies into classroom teaching has been tried, stressing the development of self-study abilities, logical thinking abilities, organizational and administrative abilities, and skills in oral expression and scientific research.

Personnel and Program Policies

China is a socialist country exercising the principle of democratic centralism. The admission of students and the assignment of graduates are carried out according to a national unified plan. All teachers colleges and universities participate in the National Unified Examinations to select their students, and in the National Assignments Plan to assign their graduates. Secondary teachers schools participate in the Provincial Unified Examinations and Assignments. The state considers the sources and qualities of student admissions and rules that the key teachers colleges and universities in all provinces and the key national universities are listed in the first group of higher education institutions which have the priority of selecting their students ahead of others.

All levels of teachers colleges and schools have, in accordance with their characteristics, done their best to improve the system of student admission and graduate assignment. First, before the national examinations, many colleges and schools have carried on various ways and means of propaganda work to inform the graduates of middle schools before they make decisions to choose their specialties according to their interests and needs. Second, in concurrence with the principle of "choosing the best applicants according to all-round moral, intellectual, and physical development," we pay special attention to the interests of the applicants. Those who love teaching and have decided to choose teacher training will be given the priority of admission. Third, according to the special requirements of teachers, the conditions of admission will depend on political-ideological character, health conditions, examination grades, and on the results of visual and oral tests. Fourth, those who are older but have practical experience in teaching and are resolved to choose teaching will be given priority admissions. Fifth, the principle of fixed-orientation in admission and assignment of graduates is exercised to a certain extent in order to encourage applicants from the rural and remote regions and to guarantee high-quality teachers to render service in such places. In recent years, concrete measures have been taken to implement such approaches. Sixth, a certain percentage of student scholarships have recently been created to be granted to students in need or with high academic achievements. All students admitted to teachers colleges and schools are given free board and lodging. Beginning in 1983, the scholarships award system was proclaimed in addition to the per capita subsidy. Those students getting high grades or in special need receive scholarship awards. Seventh, every graduate is assigned to a definite post after graduation.

Continuing Professional Development

The percentage of unqualified teachers in China is comparatively high. This situation presents a hindrance to the development and improvement of training qualified persons. Effective measures have been rapidly taken to raise the quality of teachers as quickly as possible. Our Party and government leaders have emphasized the effort to improve teachers, and raised it to the level of national consideration. Not long ago, national leaders suggested three steps to improve the working conditions of teachers. The first step is to see that all primary school teachers are graduated from the secondary teachers schools. The second step is to raise the primary school teacher training up to the two-year teachers college. The third step is to raise the primary school teacher training level to that of the four-year teachers college. To make such an effort in a big country like China with more than eight million secondary and primary school teachers requires us to adopt a series of strong and workable measures and to carry on long and arduous work.

At present, the principal programs for inservice training of teachers are the following:

1. More than two thousand teacher retraining colleges and schools have been founded to be responsible for the program of inservice training of secondary and primary school teachers.

2. The six teachers universities directly controlled by the Ministry of Education, together with the provincial teachers colleges or universities, comprehensive universities and other specialized colleges and universities take the responsibility to run inservice classes or to organize teacher divisions to enroll graduates of two-year teachers colleges or middle school graduates to study in the universities for two years in order to enable them to attain the four-year B.A. level or two-year college level respectively.

3. Inservice teachers participate in correspondence courses, part-time schools, broadcast schools, TV universities, and vocational schools run by teachers universities.

4. The state has organized a self-study Examinations Board to encourage a higher academic standard for self-study. Those passing the examinations given by the Examinations Board receive diplomas entitling them to the same privileges given to the graduates of full-time colleges and universities.

The above mentioned channels for inservice training of teachers in secondary and primary schools are available now, especially for the teachers not up to the standard as ruled by the government. But the rapid progress of science, technology, culture and education necessitate rapid change of teaching material that will enable qualified teachers to remain so. Thus, even qualified teachers need continuous retraining so as to renew their knowledge and to qualify themselves to continue teaching.

Educational Research

The coordination of comprehensive educational research programs in China was treated in a series of conferences. Beginning in 1978, a national science conference was called. Then, in 1979, the first conference on the planning of educational scientific research programs in the country was held. The National Conference on the Translation of Educational Publications occurred in 1980, and the Second Conference on the Planning of Educational Research in 1983. In the past few years, educational research agencies have been substantially modified. First, the Central Institute of Educational Research was rebuilt to become the National Centre. Second, about 16 provinces, and 37 teachers colleges and universities have organized Institutes of Educational Research with a total of 1,200 staff members. Third, about 28 provinces have organized educational societies, and 15 national societies of education were set up, with a total of more than fifty thousand members. Fourth, more than 200 higher education institutions have organized higher education research groups, and many secondary teachers schools have organized such groups. In short, a nationwide network of educational research agencies has been set up; many of them have started research on the theoretical and practical problems of education and have achieved some encouraging results.

However, scientific research in education is still at its early stages. The over-all planning work has not been fully realized; the training of research personnel is not equal in different parts of the country; the budget for educational research is too limited; and material and information are not modernized. The results of educational research as compared with the needs of the four modernizations are still far from satisfactory. The tasks before educational workers, especially teacher educators, are still quite arduous. From now on, educational research in China should be more consistent with China's social-political system, taking Marxism-Leninism-Mao Tsetung Thought as the guideline; more relevant and realistic for the process of development and reform of China's educational objectives; and aimed at building a scientific educational knowledge base as a contribution to educational research activities worldwide.

In research, emphasis should be given to educational experiments and surveys as well as summaries of educational experience -- the good experience of the old liberated areas and the experience since the founding of New China. At the same time, we must learn from experience abroad. Concurrently, we must keep constant watch on the training and growth of research personnel, the accumulation of material and information, and the evaluation, publication and application of research results.

Conclusion

Teachers must have professional training. As long as there is education, there will be teacher education. We believe that in the future, in whatever kind of social system, and in whatever period of history, human kind needs teacher education. The extensive application of computers in education and the introduction of new scientific inventions into the field will certainly bring forth revolutionary change and reform. This presents a new challenge to teacher education: to run teachers colleges and schools in the old ways will not do. In the face of scientific, technological and social change, teacher education workers must face, understand, and grasp reality. We must reform teacher education in terms of change. In our practice, we must summarize and share our experience, and learn from one another. We come here with the earnest intention to learn from you and to exchange with you our experience.

We are very happy and fortunate to have had the opportunity to take part in this international gathering, and for the opportunity to meeting so many new friends and co-workers in the field of teacher education. This is a very good opportunity for us to learn the valuable experience of teacher education from you all. We sincerely hope that you will give us comments and suggestions for reforming teacher education in China for the benefit of the whole world. Thank you very much for your kind attention.

INNOVATIONS IN PRESERVICE TEACHER EDUCATION: ABSTRACTS OF CONCURRENT SESSION PRESENTATIONS

The Role of the Principal in Preservice Education (Anderson, Gail G., Orinda Union School District, California, U.S.A.)

Upon reviewing the historical background of teacher education and laboratory experiences and being apprised of the demands for cooperation between universities and schools, it becomes apparent that there is an immediate need for clarification of the principal's role in preservice teacher edcuation. Within the broad categories of university-public school cooperation, professional development, school climate, and teacher selection, orientation, supervision, and evaluation, the principal has several responsibilities. A questionnaire was developed to determine the perceptions of the various groups which deal with preservice training, including university faculty, principals, supervising teachers, student teachers, and laboratory students. Areas in which principals were perceived to have roles were university-public school cooperation; professional development; school climate; selection; orientation; supervision; and evaluation. The principals' roles in each of these areas are discussed. Major findings from the questionnaire are reported, and recommendations, based on the findings, are made.

Theory With Practice (Churukian, George A., Illinois Wesleyan University, Bloomington, U.S.A.)

In the preparation of teachers, integrating education theory with school practice is a challenge to the educator. When theory is taught away from the school setting, pre-professional teachers tend not to relate the theory to school practice. This paper describes a method if integrating education theory with school practice. The program described is part of the professional education sequence for pre-professional teachers in the secondary education program. To effectively present the relationship between theory and practice, these premises are established: (1) Educational psychology, instructional procedures, and student teaching are viewed as one course extending over a period of three semesters; (2) This sequence of courses begins with more theory than practice and ends with more practice than theory; and (3) The practice is developmental, and pre-professional teachers begin their practice by tutoring young children and end it by teaching late adolescents. Theory and practice are on a continuum with practice thought of as "what is" and theory as "what could be." There is an interaction between theory and practice; practice helps to define and develop theory while theroy helps to explain practice.

Trends in the Preparation of Teachers at the Preservice Level in the United States (Huffman, Gail M. and Eugene Schaffer, University of North Carolina, Charlotte, U.S.A.)

> This paper presents some of the trends which are currently affecting teacher education at the preservice level in the United States. The first section addresses the trend of widespread public concern about the nation's schools, which resulted in part from the numerous reports and books generally critical of the education system. A summary of the reports' recommendations is included as are the implications for change in teacher preparation. Discussion in the second section relates to the trend toward the development of a research base to study the nature of teaching. Summaries of research conducted in classrooms to determine effectiveness are included in this section. The third section addresses the trend toward increasing the awareness of preservice teachers concerning the need for multicultural understanding and education. Specific examples and modules for multicultural education are included.

Orchestration in Changing Change: Innovations in Preservice Teacher Education in Singapore (Kooi, Sim Wong, Institute of Education, Singapore)

> Any attempt to improve learning involves the process of changing change. Insufficient attention is usually paid to the need for corresponding changes in teacher education. In Singapore, some far-reaching changes have been envisaged and are, in fact, occurring. This paper discusses "missing links" which led to the need to improve education in general and preservice teacher education in particular. Also described are the development of links between research and teaching and theory and practice. Another connection treated in the paper is the link between preservice and inservice teacher education.

Blending Culture and Teacher Education (Laohavanich, Yenchai, Silpakorn University, Nakhorn Pathom, Thailand)

> The teacher education system in Thailand needs to incorporate innovations from the affective domain of learning. Problems in the present situation include students who do not really want a teaching career; emphasis on cognitive achievement (to the detriment of affective education); and inadequate communication between teacher education faculty and students. This paper describes a case of innovation in the affective domain of teacher education in Thailand. The case represents the blending of culture with teacher education; it is a revival of a traditional ritual, with some changes, such as the conferring of the "teaching right" to student teachers. This five-part ceremony serves to motivate prospective teachers. A description of the ritual, as it has been conducted at Silpakorn University, is presented.

The Progress of Five Attempts to Improve the Quality of Secondary Teaching in Papua New Guinea (Palmer, W. O., University of Papua New Guinea, Goroka, Papua New Guinea)

It is generally agreed that academic standards in Papua New Guinea high schools are below those in many other countries. This paper examines this problem in general and also in relation to the teaching of mathematics and science. Several innovations have been attempted, some of which have tried to improve the quality of teachers and teaching, while others have been more concerned with producing efficient teachers. This paper describes five of these innovations, which are: (1) the Conversion Course; (2) the six-month S.M.I. Course; (3) the Double Subject Science Course; (4) the additional year at Waigani; and (5) the Distance Education Advanced Diploma Course.

The Initial and Inservice Training of Nursery School Teachers (Rubagotti, Giuseppina, Ministry of Education, Rome, Italy)

Two issues affect the initial and inservice training of nursery school teachers in Italy: (1) the hypothesis of starting compulsory schooling at the age of five (three in the nursery school); and (2) the reform of the Elementary Teacher Training Institute. Inservice training is a fundamental aspect of the teaching profession, and personal participation towards a professional requalification is stressed as a right and a duty. It will be necessary to implement or improve the following points for inservice teacher education: (1) establishment of territorial centers for teachers; (2) training of the teachers' instructors; (3) distance learning; and (4) university role. Regarding initial preparation, the universities must develop mew didactical courses and establish connections with pre-university schools for the training of nursery school teachers. This professional preparation has to take place within university courses where education science and studies will be introduced, together with the necessary experiences, to promote the dynamic interrelationships between the subjects studied and the methods of teaching them.

The Experienced Beginner: Innovation in Preservice Teacher Education (Ryerson, Norman E., Central University of Iowa, Pella, U.S.A.)

The "experienced beginner" who is presented for certification and employment at the end of teacher Preparation at Central College is the product of a program which is as completely tailored to indiviual needs and interests as permitted by the standards of the college, the Iowa Department of Public Instruction, and the National Council for the Accreditation of Teacher Education. There are two chief patterns, the basic elementary education certification sequence, and the secondary education certification sequence. Elements common to both patterns are: (1) broad liberal studies background; (2) emphasis on development of communication skills; (3) inclusion of mediated learning through field-based instruction in most courses; (4) candidate's progress review by the education department; (5) review by the Teacher Education Committee of the candidate's progress and eligibility to proceed at each step in the teacher education program; and (6) participation as a senior in the Placement Office's training program. Procedures for and acivities in elementary certification, secondary certification, product evaluation, the teacher education committee, the Area Teachers Advisory Board, and program evaluation are described.

Needed Innovations to Improve Teacher Education in India (Singh, Ramjee P., Patna University, Patna, India)

Enormous expansion of education, changes in social conditions and attitudes, continuous rise in population, and the nation's commitment to secularism, socialism, and democracy have created demands for changes in the theory and practice of teacher education in India. As teachers are prepared in the teacher education colleges, the standard of education, to a large extent, depends upon the standard of teacher education programs. Teacher education in India has failed to meet this challenge. It would not be out of place to say that, in spite of several advancements in the field of teacher education, there has not been desirable improvement in the teacher education programs. A history is given of India's development with particular emphasis on education, to provide the background for proposed innovations to its teacher education programs. Innovations are suggested in the organization of teacher education institutions, courses, teaching practice, and student teaching.

Innovations in Preservice Secondary Teacher Education in India (Singh, S. P., University of Avadh, Gonda, India)

The teacher education programs in India have constantly been criticized as rigid, lacking vitality, relevance, and dynamism. Improving the quality of teacher education in India is a major task. Some innovations have been suggested and half-heartedly tried out, but the situation has not changed much. A historical review is given of the development of teacher education programs in India. Many of the attempted innovations and their effectiveness are described. Concluding remarks suggest conditions which will affect future attempts to introduce innovations in India's teacher education programs. The conditions are: (1) Only a few teacher education programs have attempted innovations in the past, and many of those were discontinued; (2) Innovations should be need-based and within resource limitations; (3) Practitioners should be involved in the decision making processes of the innovative activities; (4) Proper preparation regarding orientation, resources, facilities, equipment, and guidance should be made before the innovation is initiated; (5) Aims and objectives of the innovations are to be clearly spelled out; (6) Most teacher education programs in India also need qualitative improvement; and (7) Continuous effort should be made to determine what makes a good and effective teacher.

Classroom Questioning and its Implications (Smith, Charles W., Northern Illinois University, DeKalb, U.S.A.)

A review of educational research in the area of teacher questioning and testing methods indicates that teacher oral questioning, teacher-made test items, instructional materials, and those tests available commercially have, for the most part, a heavy emphasis on rote recall and recognition. A well trained and highly qualified teacher may proclaim critical thinking, reflective thinking, creativity, problem solving, and making judgements as learning outcomes. When such is the case, that teacher's classroom discourse, tests, and instructional materials should reflect such emphasis. Teacher education programs need to emphasize questioning strategies in their student teaching seminars and methods courses. Preservice and inservice teachers need to realize the impact of using various types of questions before implementing their use in the classroom. Teaching must include talk and questioning about more than facts. It must include talk and questions at the higher levels of cognition if students are to think and to learn at those levels. Important issues that teachers must consider when framing questions and test items include: behavioral goals; instructional goals; instructional materials; various thinking levels; pacing; and reliability of test items and questions.

Integration of Course Work and Field Experiences (Von Kuster, Lee N., University of Montana, Missoula, U.S.A.)

For approximately twelve years, the Department of Teacher Education at the University of Montana has required field experience in local public schools concurrent with introductory courses taught at the University. Up to the present time, the field experiences have not been connected with University-based courses in other than a casual manner. This paper identifies the problems which have resulted from this lack of coordination and provides an overview of how the Department of Teacher Education has begun to take a closer look at introductory education courses in particular and improvement of the teacher education program in general. Two courses, "Orientation to Education" and "Education Psychology," were changed as a result of discussions and planning among elementary and secondary school teachers and the University's teacher education faculty. Changes in courses are described in the areas of: (1) instructional methods; (2) classroom management; (3) curriculum planning; (4) student characteristics; and (5) the school's role in society.

The Extended Program: New Requirements in Teacher Education in the School of Education, University of Kansas (Wangphanich, Paisal, Srinakharinwirot University, Bangkok, Thailand, and Bailey, Jerry D., University of Kansas, Lawrence, U.S.A.)

The extended program in teacher education at the University of Kansas answers many of the criticisms aimed at teacher education programs. It provides graduates who are truly liberally educated, who understand pedagogy, who are experienced in school classrooms, and who are competent in their teaching field. The program has seven goals: (1) The professional teacher possesses self-understanding; (2) The professional teacher has knowledge of human growth, development, and learning; (3) The professional teacher is skilled in human relations; (4) The professional teacher understands curriculum planning and instructional strategies; (5) The professional teacher manages a learning environment effectively; (6) The professional teacher evaluates student learning and uses educational research methods; and (7) The professional teacher understands the scope of the teaching profession and the school as a socio-political organization. This presentation lists the program's goals and objectives, and describes program and admission requirements.

Unifying the Knowledge Base in Preservice Teacher Education (Wendel, Robert L., Miami University, Oxford, Ohio, U.S.A.)

> This paper examines an innovative model for unifying several components essential for an effective preservice teacher education program. This model demonstrates the interrelationship of curricular and organizational structures resulting in a workable preservice teacher preparation program. This paper: (1) overviews various recommendations from the literature which call for a restructuring of teacher education; (2) describes how the interdepartmental team concept has restructured the knowledge base and delivery system in teacher education ; (3) describes the role of faculty teams representing psychological, social, and philosophical foundations of education, instructional practices, media, subject specialists, and field centers; and (4) describes how the interdisciplinary team delivers its innovative teacher preparation program.

Changes in Teacher Preparation: The Need for a Historical Perspective (Wisniewski, Richard, University of Tennessee-Knoxville, U.S.A.)

> This presentation outlines trends that may eventually transform teacher education in the United States. The author discusses some themes that need to be considered when attempts are made to evaluate teacher education: (1) change occurs slowly and incrementally; (2) teacher educators are a product of their culture and therefore not likely to provide the leadership necessary for change; (3) the impact of change is rarely assessable except in historical perspective; and (4) changes in teacher education are directly related to other cultural processes such as political, economic, and social transitions. Trends that appear to be affecting teacher education in the United States are discussed, including calls for reform, structural changes to education, extended teacher preparation programs, and state legislation.

SECTION II

Innovations in Inservice Teacher Education

INNOVATIONS IN INSERVICE TEACHER EDUCATION

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Recent years have seen a tremendous growth in books about, reports on, and research into inservice education of teachers, which is hopefully reflected in a growth in commitment of national governments to inservice education but, more importantly, in a commitment by teachers to inservice education and training. This attention has resulted from the awareness that inservice education could and should make an important contribution to the resolution of contemporary, major tasks in education such as:

1. the curricular problems associated with the extension of compulsory schooling, especially the needs of the 13-16 age group;
2. the needs of special school populations, such as immigrant groups, multi-ethnic communities and disadvantaged rural communities;
3. the needs associated with particular subjects, notably science and mathematics, and student groups, notably those with special education needs (i.e., variants on the mainstreaming problem);
4. the new demands on teachers caused by the radically changing nature of school-community relationships (e.g., relations between education and working life, renewed community demands for accountability related to educational standards and assessment);
5. the curricular and organisational consequences of declining enrollments;
6. the strategic need to provide adequate inservice for those with internal school management responsibilities.(1)

Definition

Generally, it is agreed that inservice education embraces all the planned experiences which a teacher may undergo for the purposes of extending his professional education. Some, however, would claim that every facet of his knowledge, skills, personality and interests are of potential professional value and hence would see any activity undertaken as part of inservice training. To avoid confusion, and for administrative convenience, the narrower definition of inservice education is usually adopted.

Inservice education, therefore, could be defined as:

> All those planned activities teachers undertake to improve their instructional effectiveness, personal and professional knowledge and skills and to equip them for new or changed roles.

Further, it should be noted that in some systems the only planned activities recognised as inservice education are those activities promoted or directed by the school system or approved by the school system.

Inservice Framework

One of the reasons for the development of the more coordinated approach to inservice education in recent decades has been the fact that teachers were operating within a society where traditional knowledge, skills and values were being challenged. Teachers were being asked to include more and more tasks in their already complex schedules and often to act as change agents. Clearly, inservice courses of various kinds provide one major way of assisting teachers to cope with these changes whether they be due to societal or technological changes.

The rationale behind inservice education in developing countries is often substantially different from that in developed countries. In developing countries, the three most important objectives of inservice education will be seen as upgrading the competence of teachers, extending their general education and enhancing their qualifications.

Irrespective of the differing rationale proposed for inservice education in different systems and societies, the concept that teacher development is a continuous process encompassing preservice preparation, induction into the teaching profession, and inservice activities has become universally accepted. There is the realisation that it is impossible to prepare teachers at the beginning of their careers for all they are going to face in a world of rapidly developing social and cultural change. As Masoner points out, "any plan for (preservice) teacher education reform would be incomplete without reference to inservice education."(2)

At this point it is worthwhile to compare aspects of preservice and inservice education as the comparison highlights some of the challenges facing those involved in inservice education.

Auchmuty(3) draws our attention to the following differences between preservice and inservice education.

Preservice	Inservice
compulsory training or education	requirements vary
substantial agreement about length, sequence and content training and education	little agreement
ojectives relatively specific and clear	objectives varied and wide ranging
relatively clear roles for students	roles often unclear to participants
substantial agreement on the particular responsibilities allocated to the various agencies involved	unclear patterns of interaction and responsibility between the larger number of agencies involved

Professional growth is a continuous process in which many elements come together. Different teachers will have different ways of learning and most will need a mixture of opportunities. Some of the general objectives for inservice education are:

1. to enable teachers to master the new knowledge and skills involved in the introduction of new curricula and techniques;

2. to create opportunities for stimulation and refresher activities for teachers; to encourage thinking about the problems of education; to exchange ideas and disseminate ideas, to gain new enthusiasm from shared reinforcement and forward thinking;

3. to provide facilities for deeper study into background knowledge associated with subject content and with educational theory;

4. to assist teachers to acquire proficiency in the performance of new tasks whether in specialist fields or in administration;

5. to provide professional activities wherein teachers can debate theories, examine ideas, solve problems, and contribute to the development of educational policy throughout a system.

These objectives will be achieved if it is recognised that any improvement in the standards of instruction in schools must come largely as a result of the efforts of those teachers who are already in service. They must, therefore, receive all possible support to enable them to improve the effectiveness of their teaching and that this support should continue throughout their careers in order to be able to continue to develop their professional skills and enhance the quality of their work.

Innovation

Before describing some innovations in inservice teacher education, it is desirable that we have a common understanding of what is meant by innovation. The act of innovating implies the introduction of new things or methods.

There exist many ways of categorising educational innovations. One useful way suggested by Turney(4) has six categories.

1. Organisational and Administrative Innovations.
2. Total Program Innovations.
3. Curriculum Specific Innovations.
4. Technological Innovations.
5. Evaluative Innovations.
6. Methodological Innovations.

Innovations in Inservice Teaching

As inservice education is part of the teacher education continuum, then one obvious way of reforming it is often neglected or overlooked. This way requires changing the teacher educator involved in the teaching process. Teacher educators should:

1. help teachers to become knowledgeable about available strategies and the evidence of their strengths and weaknesses;
2. select the instructional knowledge, behaviours and skills that appear most useful and make them part of the teacher education curriculum;
3. prepare all teachers for a lifetime of professional renewal through constant efforts to improve their instructional understanding and effectiveness;
4. quicken the pace and enlarge the amount of competent research.

These roles described by Howsam(5) are equally applicable and valid for both the preservice and inservice teacher educators. Improvement in the effectiveness of inservice education certainly depends on competent research as it is in this area that there are many gaps in our knowledge. There is little research evidence available on the cost effectiveness of different forms of inservice activities. A major innovation in inservice education would be to ensure that the teaching roles described by Howsam were achieved. "Do as I say, not as I do" has been a dictum in teacher education for decades and has been one of the major recurring criticisms in evaluations of inservice courses. If we expect teachers or student teachers to use certain teaching methods in their classrooms then as teacher educators we must exemplify these methods in our own teaching and we must provide early opportunities for participants in our courses to use these methods. Peck and Tucker(6) pointed out that there is a growing body of research that indicates that teacher educators should practice what they preach. When teachers are treated in the same way that they are supposed to treat their pupils, then they are most likely to adopt the desired style of teaching behaviour. Research supports the observation that courses are frequently overrated as a means of teacher development. That is not to say that they have no value in terms of bringing teachers into contact with each other and with a variety of thinking and/or materials but they do not create improvements in educational practice in relation to their cost in time and money. Improvements in instruction in the courses may lead to significantly greater changes in educational practice in the classroom.

There have been many innovations in the area of inservice teaching (simulations, discovery teaching, use of microteaching, etc.). These innovations would mainly be classified as curriculum specific innovations or as methodological innovations. The relative success of these innovations depends directly upon the quality of the instruction given by the inservice teacher educator.

Organisational and Administrative Innovations

The major innovation in this category has been school focussed inservice, which can be defined as those educational activities which focus upon the curricular interests, needs, and problems within a specific school. This form of inservice is primarily concerned then with matters that require the coordinated efforts of several, if not all, the personnel within the school. A school focussed inservice program should be designed as an integrated program that would consider all the dimensions related to the particular concern under review including those related to the school's organization and administration, the school's social context, as well as the curriculum and instructional issues involved. If appropriate, both members of the larger school community and the student body would have the opportunity to be involved in the design and implementation of the inservice program.

Apart from criticisms that it is parochial if it draws only on its own resources and that an overconcentration on school focussed inservice has a tendency to stifle the individual (i.e., the demands and needs of the school dominate the needs and interests of the individual), there appears to be ample testimony, based upon first hand experiences at least, that the following are desirable features of school focused inservice.

1. It is viewed as but one aspect, however crucial, of a larger scheme of continuing development.
2. Assumptions about how adults (teachers) best learn and continue to develop along several dimensions are frequently made explicit.
3. Interactions between the teacher as person, the teacher as learner, and the teacher as teacher at the school site are often given due consideration in designing school focussed inservice.
4. Interactions between organisational change, curricular change and inservice are often noted and incorporated into planning; implications for resocialisation and role change are given special attention.
5. Teachers are centrally involved.
6. Needs and interests of students and parents are of special importance in this form of inservice.
7. Attention is given not only to individual teachers but to key functioning groups and entire faculties.
8. Regardless of the number of teachers or size of group, individual differences are accommodated.
9. School focussed inservice often goes beyond the sharing of ideas to include demonstration, experimentation, supervised trials and feedback.
10. Building administration may assume a number of responsibilities in this endeavor, but the most critical one is a reciprocal responsibility to provide both material and psychological support for teachers who venture into new growth experiences.
11. There is continuity; inservice is seen as a process, often a developmental or incremental one, and not an event.
12. There are ample opportunities for reflection about as well as action in what one is doing and consideration of alternatives.

13. School focussed inservice frequently is concerned with teacher changes which are implied in resolving school problems of mutual concern.

14. School focussed inservice is often embedded in experimentation which is integral to the daily instructional tasks of the teacher; it is differentiated from teaching only by its intent and the type of examination and sharing which takes place later.

15. School focussed inservice has a primary focus: quality education for students in a given school through quality education of the teacher.

A major difficulty with the concept of school focussed inservice is that educational policy makers have not provided sufficient resources to permit schools to develop programs in ways that would overcome many of the known difficulties, particularly that of allowing a staff member(s) time to lead a project (A detailed case study of a school focussed inservice program is given by Eltis.(7) They also identified the need to provide training on implementing programs for the leaders of school focussed programs.)

Those interested in further details of planning and implementing a school focussed inservice program should consult Bolam's School-Focused Inservice Training(1). Finally, school based or school focussed inservice education as evidence indicates that system inservice does not involve all teachers. Amm(8) found in her sample of secondary teachers from one metropolitan region of Sydney that at least 30 had attended no inservice courses in 1980.

Technological Innovations

For a variety of reasons, technology is playing an increasingly important role in the delivery of inservice. Television and radio are being used in all forms of inservice teacher education. Computers are growing in use and importance, particularly in the area of informal inservice education. Descriptions of these applications were widely discussed at the Thirtieth ICET World Assembly in Washington, D.C., in 1983, and are recorded in the proceedings of that Assembly, so having mentioned them, it is not necessary to discuss them further.(9)

The Future

If the concept of inservice education is to be fully realised, then it will require a great deal of collaborative effort from people at all levels. If it could be achieved it would be innovative. To achieve this, Adams(10) suggests that we would need to:

1. secure recognition of the whole spectrum of situations and activities which contibute to teacher inservice education;
2. maximise their value, in terms of professional development;
3. recognise and use the professional community in a school as a learning resource for individual teachers;
4. establish the practice of initial training as a starting point followed by ongoing inservice education throughout a teacher's career;
5. investigate the structure and control of inservice education provision;
6. develop the problem solving and consultancy based approach;
7. evaluate and improve courses as a method of inservice education;
8. develop the special contributions which can be made by different providers and hence move towards a coherent pattern which will support the whole spectrum of situations and activities which are featured in the first objective.

Finally, Hayden(11) suggests that if this innovation is to be successful it will depend upon the following vital conditions:

Leadership. Educational leaders and system personnel must actively assume responsibility for developing an improved inservice education system.

Motivation. Without incentives and a reward system, need is not sufficient to motivate the acceptance of change. Teachers can be rewarded both professionally and financially.

Needs. Innovations will spread only when authentic needs are met: when teachers see that change helps them to be more effective.

Appropriate Scale and Content. Policies and innovations must be financially and professionally feasible.

Professional Usefulness. Models developed must be capable of replication and diffusion.

Built In Evaluation. Evaluation should be a necessary component of innovation to enable refining to take place.

Cooperation. All participants in the educational process should have the opportunity for participating in the design of the innovation.

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INNOVATIONS IN INSERVICE TEACHER EDUCATION IN EGYPT
CHAIRMAN'S COMMENTS

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The Current Situation in Teacher Education

Until the early 1980's, the educational ladder in Egypt included the Primary Stage, which is compulsory and covers six years; the Preparatory Stage, covering three years following the Primary Stage; and the Secondary Stage, covering three years.

In 1981, it was decided that the compulsory requirement should be extended to include both Primary and Preparatory Stages under the designation of Basic Education, including ages from six to fifteen.

According to the educational ladder, teachers for the Primary Stage (which is now the first cycle of Basic Education) are prepared in Teacher Training Institutes. The student who attend these institutes are holders of the Preparatory Education Certificate and their preparation takes five years.

However, teachers of both Preparatory and Secondary education are prepared in Faculties of Education in Egyptian universities. Their preparation takes four years after the Secondary Stage.

New Bases of Teacher Education in Egypt

Within the framework of continuing development of education in Egypt during the last decade, teacher education has come to be based on the following principles.

1. Education is one of the most respected professions. It must be constantly developed because of the important role it plays in society; it lays the foundation for the preparation of all people involved in all other professions.
2. Preparation for this profession has to take place at the university level and under one umbrella; just as all other respected professions.
3. The attitude towards education should be to consider teaching at any educational stage to be as respectable as that at any other stage. Similarly, no subject specialization should be considered more important than any other. This comprehensive view of the profession requires that all aspects should be integrated, just as in other professions, despite the variety of specialties required for practice in the profession.

Recent Innovations in Teacher Education

In light of these principles, and because of the extension of compulsory education to the ninth grade within the formula of Basic Education, it is incumbent to reconsider the preparation of Primary School teachers. Hence, it has been decided to do the following.

1. A new section is to be established in university Faculties of Education for the preparation of Basic Education (first cycle) teachers. The students recruited for this program should be holders of the General Secondary Certificate. The program should extend over four years according to a plan approved by the Supreme Council of Universities. This section has already been established in some Faculties of Education, and a number of students have been accepted. According to the new Education Law of 1981, the more students admitted into the section, the fewer should be admitted to existing Teacher Training Institutes.

2. The qualifications of existing Primary School teachers are to be upgraded through inservice courses to the B.A. level in the specialization of Basic Education.

The Ministry of Education has already made a plan, in collaboration with the Faculties of Education, to upgrade the proficiency of the existing 150,000 Primary School teachers up to the B.A. level in education and a subject specialization. Accordingly, a general committee has been formed and, together with eighteen subcommittees, have worked out a comprehensive program framework including objects, duration of study, entry system, and methods and techniques of study.

It took this committee eighteen months to develop this program, which was then submitted to the Supreme Council of Universities. The program has been approved, and it has been decided that graduates should be awarded a degree in Education and Basic Education equivalent to the present B.A. in Education and literary or scientific specialization subjects awarded by Egyptian universities.

Main Features of the Program

Objectives. The objectives are (1) to develop the ability of the learner to perform the job of teacher in the Primary Stage, either as a classroom teacher in the first four grades or as a subject teacher in the fifth and sixth grades, together with participation in general educational and administrative activities of the school; (2) to upgrade the learner's academic and professional proficiency, including the ability to pursue independent learning and to continue learning and training; (3) to develop the learner's ability to play an effective role in developing the community and society and in raising the standards of the profession.

General plan of study. The program includes two types of courses: general courses for all students that aim to upgrade teaching proficiency for the first four grades and develop cultural and professional fundamentals; and specialized courses to qualify the student to teach in the fifth and sixth grades as subject teachers in Religious Education, Arabic, Social Studies, Mathematics, and Sciences.

Methods and techniques. The system of study has the following features.

1. Because of the difficulties of releasing teachers to study on a full-time basis and of travelling to learning centers, materials are delivered to learners wherever they are during the school year.

2. Learners adopt a self-study system which uses multimedia, including books, manuals, and television and radio programs.

3. Learners come to study centers for a few hours whenever they are free to meet members of the teaching staff and to discuss program material.

4. Learners attend regular classes for two months during the summer vacation to study subjects that require practical or language drills.

The program was started in 1983, and the first group of 10,000 Primary School teachers who hold the intermediate certificate go regularly to thirteen centers in the governorates of Cairo and Giza. This has been on an experimental basis. It is envisaged that the program will be extended in 1984 to include Primary School teachers in other governorates, and then to extend gradually into all governorates.

Evaluation. Every year of study consists of three semesters: two during the school year and one during the summer. The latter includes practical courses. A learner can register for some courses in the first semester and for others in the second. The examination in these subjects is given at the end of each semester. Registration for the courses at any level is possible after having passed the examinations at the previous level.

In the summer semester, it is possible to register for two courses of the higher level, provided the student has succeeded in all courses of the level has has registered for. The minimum score for each course is 50 percent.

The final grade point average of the graduate is calculated as the average scores of the four levels. If a learner's score is very weak twice at any level, then the registration is cancelled. No learner is allowed to repeat an examination in any course more than twice.

INNOVATIONS IN INSERVICE TEACHER EDUCATION: ABSTRACTS OF CONCURRENT SESSION PRESENTATIONS

Innovation in Inservice Teacher Education: Pakistan's Experience (Allana, G. A., Allama Iqbal Open University, Islamabad, Pakistan)

The conventional system of inservice teacher education in Pakistan is limited in its effectiveness because of several problems: (1) A very small number of teachers and educational administrators can receive inservice education; (2) Teachers and administrators have to leave their jobs to attend inservice education courses; (3) It is expensive; (4) Lack of incentive for participation in inservice education courses results in ineffectiveness of the courses; and (5) The courses are of short duration and mostly job-specific. Establishment of the Allama Iqbal Open Univeristy in 1974 marked the beginning of an innovation in teacher education in Pakistan. The Open University system has definite potential for providing inservice education to a large number of teachers and administrators. This presentation provides a detailed description of the Open University's inservice program, covering the topics of teaching methods, various inservice programs and courses, educational planning and management, and certification requirements.

An Experimental Model for Inservice Teacher Education for Universal Primary Education in Bangladesh (Basu, C.K., UNESCO Advisor on Training, Dacca, Bangladesh)

Primary education in Bangladesh suffers many ills, including lack of school facilities; lack of adequately trained and motivated teachers; lack of effective local level supervision and inservice teacher training; and lack of materials for training education personnel. These and many other factors lead to a high number of drop-outs at the primary education level. The Bangladesh government launched an ambitious program for Universal Primary Education (UPE), which aims to: increase primary school enrollment; decrease drop-out levels; improve quality of instruction; strengthen local level administration and supervision; improve school-community relations; and provide school buildings and other learning facilities. The UPE project includes plans for innovations in teacher education. This paper describes the innovations and their current effects on primary education in Bangladesh. The project's use of change agents is described, and their role in the five-phase training model is discussed. Also detailed are the preparation of modularized training materials, the training programs for change agents, and the training methods for teachers who will work with the change agents.

Providing Resources for Professional Development: A Field-Based Model (Bloom, Darrell, Arthur Hyde, and Paula Jorde, National College of Education, Evanston, Illinois, U.S.A.)

The Field-Based Program offered by the National College of Education (Evanston, Illinois) is a model for the delivery of educational services that takes into account the special needs and preferences of adult learners. It is an alternative approach to professional study which addresses educational needs which may not be adequately met through traditional programs. There are three reasons for the model's success: (1) It provides a systematic approach to professional development; (2) It supports curricular change in schools; and (3) It is a very cost-effective and efficient delivery system. The Field-Based Program has broad implications for providing professional growth experiences in a variety of educational settings. As a cost-effective, easily implemented inservice model, it has promising international applications for promoting substantive change in educational institutions.

Malaysian Teachers and Their Continuing Education (Don, Fatimah Hamid, University of Malaya, Kuala Lumpur, Malaysia)

Post-independence developments in the national education system in Malaysia have necessitated not only rapid expansion in preservice teacher education, but have also mandated several urgent inservice teacher education programs. A survey of teachers' perceptions of their training and continuing education needs was recently undertaken. Insights were obtained with regard to the teachers' preferences for training in knowledge and professional areas, their preferred learning modes, and the kinds of activities that would involve the larger portion of their teaching time. While centrally organized inservice courses were seen as career obligations and the prerogative of the selected group to be actively involved in the formulation of national level policies, the provision of opportunities for self-learning activities were clearly understood. Future planning for inservice programs needs to take more serious heed of such opportunities -- probably in formulating the functions of regional resource centers -- in the continuing quest for excellence in education.

The Master Teacher: Alternative Models, A Literature Survey Approach (Himmler, Arthur H., Washington State University, Pullman, U.S.A.)

A study, originally prepared in November 1983 for members of the Provost's Commission on Teacher Education at Washington State University, reviewed relevant research literature pertaining to the "master teacher" concept and drew up a synthesis of models for possible implementation in the University's teacher education program. Over 100 pertinent sources were examined. This effort in "master teacher" role conceptualization yielded seven distinct models of master teacher activity: (1) master teacher as mentor; (2) master teacher as expert; (3) master teacher as team leader; (4) master teacher as supervisor; (5) master teacher as trainer; (6) master teacher as degree-holder; and (7) master teacher as merit-payee. This study proposes a seven-stage hierarchical sequence model of the stages in the growth of a master teacher. Through task and role analyses of the various stages, appropriate inservice interventions could be formulated.

A Systems Approach to Inservice Teacher Education (Knight, Carlton W., II, American University of Beirut, Lebanon)

The systems approach is particularly applicable to many aspects of education. It implies a well-organized structure of interconnecting components, clearly defined roles, systematic procedures for identifying needs and accomplishing goals, and conditions prompting continuous feedback and constructive evaluation. A systems approach to inservice teacher education should be a concerted effort to embody the systems philosophy within an efficient operational setting. This essay is a critical review of one quite successful systems approach, involving inservice teacher education. It includes suggestions for implementing modifications of that model in other locations. The system described is the Delaware Model: A Systems Approach, designed to improve the complete spectrum of science education in the State of Delaware and successfully operated there during the early and mid 1970's. Its administration, resource centers, field agents, dissemination unit, funded projects, evolution, and problems are described.

Distance Education and Teacher development: Diversity Down Under (Lewis, Ron, Deakin University, Victoria, Australia)

This paper examines the approaches taken to the design and production of off-campus courses at graduate and master's levels within the School of Education at Deakin University, describes processes of assessment and the nature of support systems, and addresses the future directions with specific reference to the impact of new technologies. A description is given of reasons why many teachers in Australia choose to further their education through off-campus courses. The development of three such courses -- Curriculum Design and Development, Classroom Processes, and Classroom Research -- is detailed. Also described is the development of assessment methods which are "context-responsive" and which allow students to describe, analyze, and critically reflect on the course and its effects. The tutor's role in providing support to students is discussed in reference to specific academic concerns, general study advice, administrative advice, and personal assistance. Future directions discussed include the use of media and technology.

Inservice Training for University Teachers -- Educational Technology (Maia, Nelly Aleotti, Ministry of Education, Brazil)

> University teachers have a difficult task. They are, on one side, supposed to be up-to-date with the latest outcomes of scientific, philosophical, or artistic resaearch. On the other hand, they are expected to communicate by the best methods, techniques, and materials, the essentials and highlights of culture. Issues which deal with the role and training of university teachers are discussed, including the need of forming good teachers as a priority in the educational policy of developing countries, teaching and research as a two-fold purpose and not as different activities, innovative uses of educational technology for teacher preparation, and technology as an integrated outcome of science and philosophy.

Methodological Issues in Researching Teacher Education (Sharpes, Donald K., Weber State College, Ogden, Utah, U.S.A.)

> Teacher education is a part of what western researchers refer to as a social science. Education, and specifically, teacher education, is a primary social force woven throughout the study of national development and all its processes. Theories of what or how to study problems of teacher education are themselves developmental, and thus could be the object of study. There are at least three major factors that govern an understanding of how teacher education relates to national progress and development -- economic realities; political realities; and social realities. This paper sketches a brief outline of the impact of these realities on the study of teacher education, specifically in developing countries. The effects of teachers on student achievement in developing countries is also discussed.

Innovations in Staff Development at Thai Colleges, Campuses, and Institutes of Agriculture (Shettlesworth, Clarence, MAEJO Institute of Agricultural Technology, Chiangmai, Thailand)

> This paper describes ongoing work in upgrading the quality of agricultural technology education in Thailand. It is argued that an integrated development project is needed providing teacher training for English and agricultural teachers and realizing appropriate uses for English, information, and resources within the agricultural technology system. Background is given on the English in Agricultural Technology Project, agricultural technology education in Thailand, and location and staffing of institutions. Issues considered crucial in their effects on staff development are discussed, including the flow of agricultural information to and from the institutions and the training and experience of teaching personnel. Types of programs which would help to solve problems are described: Thai Agricultural College Transfer of Information Cooperative Services; Agricultural Reference Materials; establishment of Audio-Visual Resource Centers; staff development for English teachers; and staff development for agricultural teachers.

Teacher Education: The Staff Development Context (Thompson, A.R., Bristol University School of Education, England)

Often, when changes are called for in education, it is the preservice teacher education program or school district that receives the most attention in attempts at reform. Many attempts do not take into account the influence of existing education staff on proposed changes in educational practice. Staff development programs have the capacity to reach inservice education staff, meet their needs, and help them to implement changes to improve educational practice. To be successful, a staff development program must be able to assess staff needs in three areas -- knowledge and skills, personal characteristics, and opportunity to learn and practice skills. Ways to meet these needs are addressed in a description of a staff development model.

Curriculum Development: An Exercise in Professional Development (Yaxley, Bevis, University of Tasmania, Australia)

This paper gives details of the development, implementation, and evaluation of a three-year staff development program for senior personnel of the Education Department of Tasmania, Australia. Innovative features of the program include: (1) The Senior Staff Development Program was jointly sponsored by the Centre for Education of the University of Tasmania, the Tasmanian College of Advanced Education and the Education Department of Tasmania; (2) This sponsorship was made possible through the tripartite organization of the Centre for the Continuing Education of Teachers; (3) Each course in the program was taught in three periods each of five days duration; (4) The program's content was developed from a range of practical problems related to the schools in which the course participants were teaching; (5) Students were assessed on the basis of the curriculum and teacher development strategies developed during the course; and (6) The program was self-generating, and resulted in a range of further studies.

SECTION III

Innovations in Educational Technology

INNOVATIONS IN EDUCATIONAL TECHNOLOGY

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Introduction

It is a pleasure to be here and to participate in this Thirty-First World Assembly of the International Council on Education for Teaching. My compliments to the Board of Directors in their selection of this year's theme, "Innovations in Teacher Education: The Pursuit of Excellence." It is indeed a timely theme, one which is very important and one which, after this conference is over, should prove to be beneficial to all of us as we work for education in our home countries.

My presentation is in two parts. The first part will be a brief paper, and the second part will be a series of projected visuals illustrating the items discussed.

The items that I will be discussing are holography, fiber optics, interactive video, microcomputers, and the Korean Educational Development Institute. The paper will conclude with some statements about what we have learned in relation to innovative technologies.

Holography

For purposes of this presentation we will think of holography as the creation of images in a three dimensional format on a flat plane. When viewed by the human eye, such an image can be seen from all sides, the top and the bottom as well as all angles in between. Developed in 1947 by Hungarian Nobel Laureate Dr. Dennis Gabor to improve the electron microscope, holography today is used in many ways to do many things. Dr. Gabor coined the term "holography" from two Greek words -- "holos" and "gramma" -- meaning "the whole message."

Some applications of holography are reasonably well developed; others are still in the experimental stage. Educational applications include a wide range of experimental activity such as in art studies, in the creation of images of physical specimens for study by medical students, and in the design of architectural and engineering structures. Computer generated holograms now allow the synthetic creation of things that do not exist. Work being done by Dr. John Caulfield, principal research scientist at Aerodyne Research, Inc., involves calculating a hologram of an ideal standard and then drawing it with a computer in order to obtain a perfect reference against which to compare actual products, such as giant mirrors for infrared sensors.

It is anticipated that holography will continue to be among the innovations in instructional technology. For the foreseeable future, this innovation will include continued development of such applications as X-ray holography, computer graphics, educational data storage, and pattern recognition. Since computer graphics capabilities coupled with holography can be used to create images of three dimensional objects, it is anticipated that within the next ten years, X-ray holography will enable researchers to record a three dimensional view of human cells. This will become a tool in the diagnosis of disease as well as a device in the training of medical students. Also, realistic three dimensional architectural models can be created for study. With a change or two at the computer keyboard in some elements of a structure, an engineer can study the changes in the loads and stresses that would be applied to various components, thus avoiding some of the cost that might occur in the field with less refined methods.

In the storage of data, holographic techniques may some day outperform all currently existing methods. Because holograms are essentially light waves, they can reduce information to very small sizes. Theoretically, all of the data in the U.S. Library of Congress can be stored on a hologram about the size of a postage stamp.

Soon, quality control in manufacturing will use holography. By designing holograms that represent a perfect standard and stationing this at a conveyor, defective products can be identified as they move along an assembly line. Since defective products will not match the pattern projected by the perfect hologram, they will be rejected. For the educational technologist working as a trainer in business and industry, this represents a major employee retraining challenge.

Fiber Optics

Fiber optics is a relatively new technology based on the transmission of light through very small strands of ultrapure glass or plastic. Much more information in much less space can pass over channels of optical fiber as compared to the traditional copper wire. It is possible to transmit 10,000 simultaneous telephone conversations through a single pair of optical fibers. Less than four and one-half pounds of optical fibers has the same message carrying potential as 16,000 pounds of copper wire.

Fiber optics has found its way into a variety of educational applications. In the late 1970's, fiber optics was used in computer assisted instruction first in a community computer center and then in local homes of a suburb of Osaka, Japan. Two-way communication using fiber optics is a major element at the Higashi Ikoma model town near Osaka. There, in 1979, 158 homes were linked by optic fiber with a computer and transmission center, under the guidance of Japan's Ministry of International Trade and Industry. Called "Hi-OVIS" for "Highly Interactive Optical Visual Information System," the network allows simultaneous transmission of a wide variety of programs. In effect, it lets each home receive a different program. In its educational application, a small hand-held keyboard allows a learner to respond to televised home study lessons. A computer checks the responses and adjusts the speed of the course material according to the learner's rate of progress.

Interactive Video

While there are many examples of interactive educational technology, this presentation will concentrate on the use of a computer and videodisc player. The specific application is in the training of medical doctors in the treatment of Hansen's Disease.

Near Louisiana State University is the National Hansen's Disease Control Center -- the only one of its kind in the world. Each year, medical doctors from countries with a high incidence of leprosy come to the Center to study the disease and its treatment. Providing effective educational experiences in such an undertaking is a major commitment of the Center. Dr. Richard O'Connor, director of education and training at the Center, has designed a computer driven interactive video system. The system uses a microcomputer coupled with a standard videotape player and a videodisc player. The videodisc has been programed with information that can be searched and accessed randomly. The videotape player, while also computer driven, must present information sequentially. This system has the capacity to hold a tremendous amount of technical graphic information in a "still" mode (up to 54,000 frames) and on the same disc have motion, timing, and sequencing of information when needed. Other advantages of the system include its availability twenty-four hours a day, and its capability to adjust its speed to the learner's pace. Research continues on what medical information lends itself best to each of the three formats -- computer, videodisc, and videotape.

Microcomputers

One of the more recent innovations in instructional technology is the microcomputer. There can be little question that the use of microcomputers in schools is the fastest growing phenomenon in American education today. Some 68 percent of the public schools in the U.S.A. have microcomputers. In just one year, the number of schools with microcomputers more than doubled. In the fall of 1982 there were 24,690 schools with at least one microcomputer; by the fall of 1983 there were 55,765 schools that had one or more microcomputers. The most impressive rate of growth has occurred at the elementary (primary) school level, where the number of schools with microcomputers has increased fivefold since 1981.

In the State of Louisiana, the proportion of schools reporting the use of computers in instruction rose from 27 percent in the 1981-82 school year to 81 percent this year. A total of 482 units was reported in use by schools in January of 1982; this year the total is 4,350. Other states are reporting a similar expansion in the number of computers in the schools. It is estimated that there are some 350,000 computers distributed among 55,000 school buildings.

But just having computers in the schools does not necessarily lead to better instruction. Some very basic and fundamental questions remain to be answered. The represent concerns over equity and access, placement of equipment, preparation of teachers, and the role of schooling in the future.

While the number of computers in the schools across the U.S.A. seems at first glance impressive, access to the machines may be quite limited, and the amount of time a student spends on one may be quite small. If you compare the number of students to the number of computers you find that there is one computer for every 125 students.

Equity and access in the use of microcomputers is related to their physical location in the schools. The more common places have been the regular classroom, to be used by individual teachers with their classes; libraries, where teachers may send students to use a computer; and computer laboratories, for use by students on a walk-in basis. Some schools have placed them under the supervision of a department or office. Some schools use a mobile system, allowing units to move from one location to another.

Where schools locate their microcomputers has an impact on how they are used. Henry J. Becker at the Center for Social Organization of Schools at Johns Hopkins University reports that:

> Keeping microcomputers solely in classrooms has largely negative consequences, although equity of use is improved for secondary schools. Putting computers into a laboratory situation, in contrast, has generally positive consequences, except for equity.
>
> Locating computers in libraries has a mixed impact. It may improve equity in elementary (primary) schools and increase use by teachers and students in secondary schools, but not much consequence appears to flow in terms of learning or improving social organizational outcomes. Rotating computers from room to room is generally positive for secondary schools and improves equity and access at elementary schools, but at the expense of computer-using students who get an insufficient amount of time to accomplish much learning. Dispersing computers among several locations appears to have only negative consequences for elementary schools, but has the benefits for secondary schools of inceasing access for larger groups and for a broader range of activities.(1)

Equity is related not only to the location of computers in the schools, but also to the level of income that a family earns. Computers may produce the effect of broadening the gap between the "haves" and "have-nots." Ernest Anastasio, Vice President of the Educational Testing Service, stated that while some computers "can exercise an important influence on learning and development . . . computers reside primarily in the homes of the wealthy and highly educated. ." He further reported that most home computer buyers earn over U.S.$35,000 per year.(2, p. 17)

About 60 percent of the more than six million home computers in the U.S.A. are in households with children. Thus computers may increase the already sizable educational gap between middle and lower income families. A good example of computers being used in an innovative home education project is the "Stay at Home Learner" activity in

Massachusetts. In this project, the students receive most of their formal education at home via computers, and in some cases, television. Regular school attendance is minimal.

While many questions remain unanswered, there appears to be concensus on the role that computers are currently playing in the education process. Generally, there are five kinds of computer activity or instructional program. There are games, drill and practice, tutorials, simulations, and adventures.

One fundamental advantage of games is that they help the student learn and sharpen skills. Games are fun, so people play them over and over, constantly reinforcing their skills. Few students like practicing skills simply for the sake of practice, and yet practice is needed to become more skillful. Drill and practice is a very useful computer activity; the computer is a tireless tool and does not lose its patience when drill may become tedious or repetitious. When developed properly, drill and practice programs can analyze student responses, react to those responses, and build subsequent activities to provide work in areas of weakest performance. Tutorial programs typically are used for the type of instruction in which content and procedures are constant. Simulations allow a student to manipulate certain data or model elements and then to observe the effect of these manipulations. Popular among these have been programs involving ecology, the stock market, and food production in relation to population needs. Closely allied to simulations are adventure type programs. These allow a student to control the sequence of a simulation from the keyboard.

The Korean Educational Development Institute

While computers may be the latest entry in a long series of innovations in educational technology, there have been some other noteworthy innovations around the world at the national level, using existing elements of educational technology.

A good example of this is in Korea. In the early 1970's, the Korean Government began a nationwide reform in education that utilized a comprehensive analysis of its instructional system. After much study and deliberation, the Korean Educational Development Institute (KEDI) was established to implement the reform movement and to increase educational efficiency. Instructional television, radio, and individualized instruction were emphasized in this new development effort. The role of the classroom teacher changed, school management and administrative practices changed, and the teacher preparation programs of colleges and universities changed. These changes led to higher levels of academic achievement for Korean school children. The Korean experience exemplifies and further underscores for all who would be active in technological innovation in education the value of comprehensive systems analysis in planning.

Conclusion

When looking at today's technological innovations -- computers, videodisc, holography, interactive video -- one wonders about the lessons learned from other innovations of the past. When one looks at the extensive and pervasive nature of some of those changes, are there any lessons to be learned? Are there any generalizations to be shared? Donald M. McIsaac stated in 1979 that an analysis of the history of the printing press, aviation, and television leads to five generalizations about developing technologies:

1. We tend to overestimate the short range impact of new technologies;
2. We tend to underestimate the long range effects of technological developments;
3. A single technology probably does not develop independently of other technologies and inventions;
4. Developing technologies often require huge amounts of capital expended over a long period of time. The availability of this capital is often the result of military, recreational or entertainment interests;
5. Potential and developing markets for a technology are closely related to the willingness to invest in it.(3, p. 11)

In direct relation to educational technology, we have learned that:

1. Any educational technology can, within its physical limitations, perform any educational task;
2. Student learning and achievement outcomes may depend as much on how a particular technology is used as on which technology is used;
3. There is not sufficent evidence to indicate that any one technology is inherently more effective and desirable than any other technology in all teaching and learning situations.

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INNOVATION IN TEACHER TRAINING
THROUGH EDUCATION TECHNOLOGY
PANELIST'S COMMENTS

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Introduction

The study of educational technology in Japan became active in the latter half of the 1960's. During the two decades since that time, scientific technology has advanced, and the hardware and psychological environment have changed as a result. Along with these changes, changes in academic concepts of educational technology are taking place. In particular, the development of computers and peripheral technology has been redirecting educational technology in the direction of information science. At the same time, some new problems are surfacing, such as in the improvement of class instruction and individualized instruction, and in relevant teacher training.

As we enter the information age, many educational institutions other than formal schools have come to participate, and the relative merits of education given by these various educational agencies are being analyzed. In this paper, the role and prospects for educational technology are studied on the basis of this present situation.

Two Major Pillars of Educational Technology

Like other academic fields, educational technology has two dimensions of study; fundamentals and theory, and the application of theory in practice. The latter, application and practice is usually emphasized in this field. In the following, the elements of study in educational technology are explained under these two dimensions.

Fundamentals and theoretical study. Studies in this area are performed by relatively specialized researchers. Included are mathematically analyzed models of information collected from various educational phases and from the study of teaching methods (in particular, data related to teachers, students and class materials). Also included are studies in information science centering on computers and education (computer-assisted instruction and the theory of database technology), and systems-based theories of planning and evaluation in education.

Application and practical study. Many researchers and teachers are involved in this area of study. The purpose of the studies is centered on finding solutions to real problems found in actual educational settings and on universalizing the principles and methods of teaching. Study in this area in Japan falls into three categories:

Instructional technology. The methodology of the instructional process including planning, implementation and management, evaluation of classes, and the ways of making use of various educational materials are studied. In the future, the study of the question of teaching internships as part of teacher training and on the proposed methods and actual cases of teaching internships will be stressed. In relation to instructional technology, the formation of instructional skill for prospective inservice teachers will appear as another theme of study. At present, micro-teaching, simulation methods, team teaching models, and so on, are being studied.

Application of educational information systems. There are great expectations for the use of microcomputers in education. The application of computers to education has been studied since the beginning of the 1970's in Japan in the form of computer-assisted and computer-managed instruction. Now that a great many people have access to a computer, there will be a growing need to study how to make use of microcomputers and video systems. Developing databases of educational information (educational materials and documents, and student characteristics) using medium-scale computers and developing the support systems to help teachers make decisions in their educational activities are other facets of study in this category. In addition, training programs to enhance the quality of information to be retained in such databases is being studied.

Development of educational programs. Included in this category are the development of educational programs considering psychological elements in the process of teaching and learning, the accumulation of findings in the area of Aptitude Treatment Interaction, research on ways to plan educational objectives and to use materials properly to meet the objectives, and the design of productive study environments.

Activities in Educational Technology in Japan

At present, educational technology-related centers have been established in 35 national universities, most of which are in teacher training colleges or departments. There are some similar centers in private colleges and universities. The educational technology centers at national universities conduct research and provide services as mentioned above. Recent emphasis has been placed on practical activities, which include the study of the problems concerning internships in teaching, class instruction research projects in collaboration with attached elementary, lower and upper secondary schools, and information management (mainly the use of microcomputers) as part of teacher training. Training courses on how to use videotape recorders are also offered by these centers to prospective and inservice teachers.

The Council of Education Technology Centers of National Universities organizes a biannual convention. During this convention, research presentations, symposia and workshops are held. There are some other educational technology-related academies such as the Electric Communication Academy (it has an educational technology section), the CAI Academy, and the Science Education Academy.

Practice of Educational Technology at Tokyo University of Arts and Sciences

The Tokyo University of Arts and Sciences established its Educational Technology Center in 1971. Its service to both students and teachers covers training before and after the teaching internship, the formation of instructional methods by micro-teaching, training in computer languages (mainly FORTRAN and BASIC), library service of videotape recorders and video cassettes (at present, 8,000 videotapes are available including records of various unique class instructions and scientific and experimental materials), the use of computers, and lending of audiovisual equipment. The number of users is increasing every year.

As part of research projects conducted in collaboration with attached elementary, secondary and tertiary schools, the Center established the video-microcomputer system and is making efforts to improve class instruction methods and to create programs for the development of teaching skill. Facilities such as individualized learning systems (multichannel audiovisual classes), and medium-size computer systems allowing both time sharing and batch mode, are installed within the Center and extensively used as a University resource.

Along with such expansion in equipment, a course on educational information science was added to the offerings of the Department of School Education in 1981. Since then, studies of information science in the field of education and actual education using information science have been conducted. For undergraduate students, subjects such as education systems engineering, theory of educational information analysis, educational information processes, and education and computers are offered as selective subjects. Many students are taking these classes. Apart from classes, activities such as the theoretical study of education and information science, the development of CAI systems, and meetings to study the use of computers for educational purposes with teachers of elementary and lower secondary schools in the community are often organized.

At the department level, research and actual instruction using educational technology methods within the framework of prevailing curriculum and educational materials are carried out.

At other educational centers on the campus, including the Education Center for Returnees from Abroad, the Research and Guidance Center for Teaching Internship, and others, educational technology approaches are introduced in practical activities and teaching.

Future Problems and Prospects in Teacher Training

As has been mentioned in the preceding sections, new technology and systems concepts have infiltrated every field of society -- even the field of education, in which rapid change is unusual. It is essential to adapt oneself to new technology and make the best use of it to conduct efficient, high-quality educational activities instead of turning one's back on the impact brought about by technological advancement.

It is indispensable for teacher training universities and departments to help their students understand the theory and acquire the practical skill in educational technology. Accordingly, the curriculum of such institutions should be rearranged.

The integration of existing curricula of teacher training courses with new curricula should be promoted. It is not necessary to negate traditional curricula, but methodological approaches of high quality need to be adopted.

At the same time, an approach seeking only an immediate return is not advisable. While placing an emphasis on practice, basic academic research, scientific findings, and technological principles and methods must be accumulated. Otherwise, there will be no genuine innovation in education. New and attractive educational devices may be praised and widely used for a short time. However, in what phase of education activities they can be applied, what kind of educational problems have been solved by using these devices, and what method and theory should be applied in using them -- these essential points must be thoroughly discussed.

INNOVATIONS IN EDUCATIONAL TECHNOLOGY: PANELIST'S COMMENTS

Colin Mably
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In thinking about this short talk this morning I had thought that I might run through the kind of things that we are involved with in the United Kingdom and in my own institution. But as the morning has progressed, it seems to me quite important to get behind the descriptions of what we do and raise some questions about why we are doing what we do.

Technical innovation has been with us for a long time. I brought my own visual aid here: a box of Hyatt matches. What is the significance of this box of matches? Well, it brings enormous power into everybody's hands. And look at that power. It produces heat and light; two of the basic necessities of life. It's portable. It uses very little of the earth's resources. It's cheap. It's widely available. I hope that you all will appreciate this because I could have been talking about a microcomputer.

But the other point about this piece of technology is that if I chose to, I could destroy us all. I could take my match and light my own hair and destroy myself. With every piece of technology, there are the components for helpful development and there are those of potential danger. And so I would just like to focus for a moment on new technologies and ask a couple of questions.

The first question is this: In whose interest is all this new technology? Is it in the interest of the students in schools? Or is it in the interest of the people who produce them? It's a well known fact that integrated circuits were developed for space technology; the funding for that came from the military as do most resources for new technology. The idea that you and I should walk around with silicone chips on our wrists was a second consideration. Having developed the chip how can we market it and make money from it? in any kind of new technological situation in education you have to ask the question: in whose interest is it, that we should have this technology?

The second question is this: Does technology enhance the human condition? While we know, for example, that it enhances medical practice, does it also improve the quality and life chances of our students? I'm talking about mainstream, everyday students, not those in universities studying higher physics.

And then there is the question: Do we really need all this technology? And perhaps a more important question: Do we have any choice anyway? Can we choose not to have the technology? So the key pedagogical question about new technology is not a question about technology at all. It is a question of what is it that we want to do. If I leave you with only one thought for this morning, it would be this. Thinking about new technology and education is actually thinking about the purposes of education.

There are a couple of other points I would like to make with particular reference to the computer. One point has to do with the computer programming the student; the other with the student programming the computer.

Those of you who are familiar with this field will know the work of Seymour Papert (Mind-Storms). His approach is to make the child the controller of the computer rather the victim of it. And here I think we come to a fundamental point. Are we to use the computer in education as a tool that we place in series between teacher and student? Or are we to use it as a tool the student can use to broaden his own imagination and to enhance his capacity for understanding?

I want to echo one other thing that Bill Grady mentioned quite rightly. We must remember that this technology is dramatically widening the gulf between rich and poor, powerful and not powerful. For example, a few years ago, if you wanted to be a technician who fixed television sets, you had to go on a study program for five years. And you would take the back off of the machine and monitor all the electron tubes inside and be an expert. That is no longer necessary. You don't need that skill to fix a television set anymore. All you need to know is which circuit board isn't working, which a little meter will tell you. Take it out, throw it away, and put another one in. New technology makes obsolete the skills that people have. If you take away the skill relevance and job identifies from people who have gone through an education system that has infused them with the identity of work, then the loss to the individual is substantial. We have plenty of evidence in the U.K. to show that suicide rates rise dramatically in areas where people lose their livelihoods, their jobs, their sense of identity with a job.

Finally, what we are seeing today is the merging of a whole range of former separate technologies into very powerful new technologies. We have just completed a study of the use of interactive video in primary schools. The impact is quite extraordinary. What we realize is that our modes of communication are changing in a revolutionary way; in a way that is at least as important and significant as the invention of movable type. We can be sure of one thing. When we change the means of communication, we change in a very revolutionary way. And I think all of us over the next few years can expect some very startling changes.

INNOVATIONS IN EDUCATIONAL TECHNOLOGY: PANELIST'S COMMENTS

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The speaker has made an amazing presentation of what the new technology is for the Western World. I urge those of us from Thailand not to go too far with this new, sophisticated, and grand technology.

Although the development of education in Thailand has a history of many hundreds of years, the development of educational technology has occurred only in the last twenty or thirty. What we have done so far is to develop technology of a relatively unsophisticated sort with the assistance of various international organizations. Much of this work has focussed on the development of teaching methods rather than on the use of highly sophisticated equipment.

As a result of the rapid development of world communications, we have come to realize that we must keep up to date on what is happening in other parts of the world. For example, the needs of the business community in Thailand are pressing the education system to become more responsive with respect to the use of technology. Computer literacy is becoming a requirement for all.

Seeking the proper balance in teacher education between training for realistic, "appropriate," educational technology and training about the most sophisticated, emerging technologies is a problem that we shall face for some time to come. It is likely that the urban areas will see the application of more sophisticated technologies much sooner than will the rural areas. This, in itself, will create a technology gap of substantial proportions.

INNOVATIONS IN EDUCATIONAL TECHNOLOGY: ABSTRACTS OF CONCURRENT SESSION PRESENTATIONS

The Potential of Interactive Learning Technologies in Formal and Nonformal Education in Rural and Urban Settings (Bright, Larry K., and Simula, Vernon L., University of Minnesota, Duluth, U.S.A.)

> Today, United States citizens are faced with the need for retraining, reconceptualizing, relocating, and revitalizing themselves in their education and employment, particularly in view of the great advances that are continually being made in technology. The intensity of need among adults and children for education, however, provides the challenge to educators to develop the appropriate software, instructional formats, and means for delivering technologies which can improve both formal and nonformal education. The College of Education and Human Services Professions at the University of Minnesota has organized its faculties and resources to address the problem of preparing educators to develop nonformal and formal education programs. The College has focussed on an interactive human services professions approach to expanding the knowledge base required for current and future educators and on the effective applications of emerging and planned information technologies in learning.

Microcomputer Information System for Teacher Education (Nishinosono, Haruo, Kyoto University of Education, Japan)

> The Japanese educational system faces the problem of providing inservice teachers with the opportunity to obtain the master's degree or the specialized certificate. Self-instruction and self-learning should be a conceptual framework for making these opportunities available. The computer system CASIST (Computer Assisted Self-Instruction System for Teachers) has potential for composing, generating, analyzing, evaluating, and modifying inservice activities for teachers. This computer system at the Center for Educational Research and Training at the Kyoto University of Education accommodates the knowledge and judgment propositions of teachers' instructional experiences and reorganizes their internal structure and data. CASIST is aimed at developing a powerful self- and mutual-learning environment for teachers. This environment will be realized with a microcomputer network which presently uses telephone lines but plans to use optical fibers in the future.

SECTION IV

Innovations in Life-Long Education: The Role of Distance Learning

INNOVATIVE APPROACHES TO LIFE-LONG EDUCATION: THE CASE OF THAILAND'S DISTANCE LEARNING UNIVERSITY

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Introduction

In this presentation, no attempt will be made to define the meaning of the term "innovation" because it is most likely that the notion of "newness" and "difference" is already widely known and accepted. Nor will the speaker try to make any value judgments as to whether innovations are desirable. Rather, the scope of this presentation will be confined to giving a brief discussion of the work undertaken by Sukhothai Thammathirat Open University within the field of life-long education through the use of the distance learning and teaching system, and to describe to what extent it has been innovative.

It is universally recognized that there is a constant need for the updating of knowledge and technology in our rapidly changing world of today. In recent years, there have been changing attitudes toward education, especially with respect to the adoption of the concept of life-long education. It has been felt that education should be democratized and provided for all on demand to compensate for missed opportunities in early life and to improve the quality of life. The desire for self-improvement that will bring about promotion, higher status, and higher income seems to be an insatiable one; hence the demand for opportunities for retraining and advanced professional training. At the same time, there has been increased awareness that previously neglected groups of the populace, such as housewives and people in remote areas, should also be better informed and better educated. In conventional universities attempts to renew and update knowledge often meet with financial obstacles and numerous other resource constraints. Facilities for the provision of higher education even in a conventional manner are already inadequate. In a developing country like Thailand where resources are limited, the use of distance education seems to offer a solution to the three main problems: increased demand for university places, lack of higher educational opportunities in remote and disadvantaged areas, and limited opportunities for further study and training without leaving employment.

Distance Learning in Thailand: Establishment of STOU

Before the establishment of Sukhothai Thammathirat Open University in 1978, shortage of university places had always been a major problem for every Government. Each year institutions of higher education were asked to improve their capacity to admit a greater number of students. The dramatic rate of increase in the number of secondary school graduates in the last decade, however, prevented them from undertaking further expansion to accommodate more and more students. Besides, in a period of increasing economic stringency, great improvements and large-scale expansion were far from possible. Despite serious efforts, the problem of university enrolment remained as chronic and grave as ever.

The growing concern for life-long education was another major factor contributing to the establishment of an institution of distance learning in Thailand. It was felt that the institutional methods and programmes provided by conventional universities were inappropriate for working people seeking higher education. They needed alternative study possibilities or a new system of education that would enable them to study on their own without class attendance while continuing their normal occupations. Determined to come to grips with the problem of access to higher education and lack of appropriate inservice professional enrichment, the Government decided to set up an open university.

After three years of planning under the guidance of Professor Dr. Wichit Srisa-an, the Open University was created by Royal Charter on the 5th of September 1978, under the name of "Sukhothai Thammathirat University", as an open educational institution having as its objectives, "the provision of education and promotion of academic and advanced professional knowledge, research, provision of academic service to society, and preservation of culture."

Thailand's Experience in Distance Learning

The establishment of Sukhothai Thammathirat Open University (STOU) marked the first adult home-based university studies programme to operate in Thailand. STOU holds to the principle of life-long education and aims at improving the quality of life and work of the general public in response to the ever increasing demand for higher education. The University seeks to provide equal access to university education for people in all walks of life as an extension of the Thai Government's policy of the democratization of education, making the best possible use of the existing infrastructure to develop human resources.

The University's general method of operation is spelled out in Section 6 of the Sukhothai Thammathirat Open University Act of 1978, which states:

> The education provided by the University shall be given through correspondence, radio and television broadcasting or other media which will enable students to learn by themselves without having to attend classes. Eligibility for enrolment and admission to the University shall be in accordance with the regulations prescribed by the University Council and shall be without entrance examination.

STOU employs the distance education system to impart instruction. To enable the student to undertake independent study with a minimum of assistance, the University divides each six-credit course into 15 units, a unit requiring one week of study, and uses a combination of different media integrated in such a way as to render teaching as effective as possible.

The teaching media STOU relies on consist of printed self-instructional course materials, audiocassette tapes, and a certain number of radio and television broadcasts along with varying amounts of face-to-face tutoring at local and regional study centres. Although printed material constitutes the principal medium of instruction, it is deemed advisable to provide audiocassette tapes as well as radio and television programmes as support media to reinforce the printed material, to stimulate the students, and to make them feel less isolated in their study.

Of equal importance is the provision of a certain degree of personal contact in the form of tutorial sessions held at study centres established in every province throughout the country. All students are assigned a study centre according to the province in which they live. Attendance at the study centre is entirely optional. Though not compulsory, tutorial sessions are considered as valuable adjuncts to the printed course materials. They help break down the isolation of home-based students, offering them a chance to discuss any problem or aspect of their course with tutors and to meet with other students.

It should be pointed out that in a developing country like Thailand, mass communications are not advanced enough; nor are they extended to all areas of the country. As a result, and for economic reasons, STOU has not adopted the large-scale use of broadcasting as a teaching medium.

All in all, students are expected to study from 15 to 18 hours a week. Some 70 percent of the time is spent on reading the printed texts, the rest being devoted to listening to weekly radio programmes, watching three to five television programmes for each course, and attending face-to-face tutorial sessions at study centres, once every four or five weeks on weekends, totalling some ten hours per course.

The establishment of STOU, the youngest of the Thai universities and Southeast Asia's first Open University, can be considered a major step in the democratization of education in Thailand. The distance learning system used by STOU has helped to satisfy the increased demands for education that the conventional methods of teaching were unable to cope with. Certain qualities inherent in such a system have also been exploited either to improve or to replace traditional teaching methods. Through the integrated system of media, briefly described earlier, university education and professional improvement courses can reach a larger number of people who otherwise would have been confined to only a low or inadequate level of education acquired before employment. Through distance teaching techniques and relevant teaching media employed by STOU, working people in various professions throughout the country, especially those in remote areas, are being given an equal opportunity to have access to both higher education and professional training at little cost, without having to stop working.

STOU is aware of the importance of on-the-job teacher education. In the 1980 inaugural academic year, the University enrolled a total of 75,334 students, including 68 Buddhist monks in the School of Educational Studies. The major areas of study offered by this School are elementary education, secondary education, and educational administration. Eligible for enrolment were inservice teachers or those engaged in occupations connected with teaching. They also had to be holders of teaching certificates or their equivalent. A number of these inservice teachers had already undergone teacher training and acquired a great deal of teaching experience, but they were still without degrees in education. In the 1984 academic year beginning July 1, the number of working adults and high school graduates enrolled as students in all the schools of the University was 87,741 with 200,716 of the previous years' enrollees continuing their studies.

In accordance with its objectives and belief in life-long education, STOU offers two types of programmes of study: degree and non-degree programmes. The course offerings are related to major national needs and their compatibility with the University's distance teaching system. For non-degree programmes, specially designed courses are offered as an educational service to the general public so as to promote personal development and professional competence. With the belief that people need to be educated from birth to death and that education constitutes one of the main necessities of life, STOU makes great efforts to design courses so that prospective learners may choose according to their individual needs.

Aware of the importance and desirability of enabling working people to develop their skills and gain the kind of knowledge essential for their professional competence, STOU launched its first Continuing Education Programme in June 1981 by offering a number of courses, selected from the degree programme, to whomever wanted to participate in this Programme, regardless of age, qualification or profession. Those courses were Foundational English, Thai Studies, Education and Life and Community, Foundations of Education, and Principles and Systems of Educational Administration. The total enrolment in this Programme was 939. Contrary to all expectations, the performance of a large number of these learners proved remarkably superior to that of many degree programme students. Of the 486 learners who sat for the examination, 223 passed, which is the same pass rate as for regular students: 46 per cent. The results of the examination taken by regular students and these learners, on comparison, were such that the University hopes that eventually it may be possible for anyone over twenty years of age to have open entry into some degree programmes, regardless of qualifications.

From the beginning STOU has intended to reach out to the remotest areas of the Thai community. It is no exaggeration to say that, thanks to its distance learning system, STOU finds itself in a comfortable position to serve various organizations, both public and private. Distance learning has made possible the cooperative projects with such governmental departments and private concerns as:

1. the Police Department in establishing a law degree programme for non-commissioned police officers seeking promotion to the rank of commissioned police officer;

2. the Department of Lands in providing staff development for those without a degree so that they might have a better knowledge of land and property law;

3. the Department of Local Administration in establishing an inservice training and education programme for the Department staff as well as for sub-district and village level health officers, administrators, their wives, and others involved in local administrative work, in order to increase their knowledge and work capability and improve their leadership capacity for effective local rural development;

4. the Office of the National Committee on Elementary Education in developing elementary school administrators throughout the country;

5. the Department of Non-Formal Education in enriching provincial public libraries throughout the country with STOU publications and other educational materials including STOU radio and television programmes, recorded on audiocassette tapes and videotapes;

6. the Ministry of Agriculture and Cooperatives in upgrading the qualifications of the Ministry's agricultural extension and cooperatives officials; and

7. the Bangkok Bank in training the Bank's staff development officers to produce self-instructional texts to be used in staff development programmes at the Bank and in admitting a selected number of Bank employees as student associates to enable them to be promoted or assigned to more attractive positions.

Thus, in the midst of a constantly changing world, all individuals throughout the country at any stage in their careers are likely to be assured some further education and training through distance learning methods. Whatever courses that the University offers and that meet their needs, they can study at their convenience and for any length of time desired.

Distance education in Thailand, as imparted by STOU, has various other attractive features. To make possible the advancement of knowledge, unhampered by traditional academic rivalries, STOU has broken down the often impermeable walls between academic departments by its organization into school or study areas. It was intended from the beginning that the various major disciplines should be brought into contact and dialogue with each other. The Schools of the University established so far, are Liberal Arts, Educational Studies, Management

Science, Law, Economics, Home Economics, Agricultural Extension and Cooperatives, Political Science, Health Science and Communication Arts.

It is also interesting to note that course materials printed by STOU are produced not by single academics but by course teams, each of which comprises some seven outstanding content specialists, one educational technologist and one evaluation specialist. Apart from these content specialists who also serve as course writers, there are also a varying number of course writers who are not course team members. Some writers are full-time staff of the relevant School; others are drawn from various universities and agencies, including some of the private sector. As regards the printed course materials, they are specially structured to enable the student to study by himself and so produced as to render additional oral explanation or comment almost unnecessary.

Through its distance teaching methods, STOU can make available to the people the most trustworthy body of knowledge contributed by a selected group of outstanding academics from other conventional institutions of higher learning which have always maintained a most friendly relationship with the University. People in all walks of life, working adults in particular, have only to make a choice of courses and programmes for self improvement on their own initiative.

Unlike conventional universities and other institutions of higher learning in Thailand, STOU as an open university using distance education methods, has been in a privileged position to handle growing numbers of students, serve new needs, and undertake new academic tasks. With its open-door policy and minimum formal qualifications requirements, STOU can provide educational and professional improvement programmes for less privileged working adults whom no conventional universities can cater to, and upgrade them to the desirable professional standards. For those who live in remote areas, their remoteness is alleviated by the University's integrated media, a combination of printed texts, audiocassette tapes, radio and television programmes and face-to-face tutorials, which are beginning to be supplemented by videotapes. It is hoped that eventually, with increased experience, resources and expertise, STOU may be in a better position to serve a greater variety of disadvantaged groups in need of educational opportunities to learn new skills and train for new jobs. All present evidence seems to suggest that, despite the huge increase in the number of high school graduates, it is quite possible for STOU to continue its expansion to meet the demands for higher education and to improve the educational standards and the professional competence of working adults whose skills need updating in keeping with the times.

The Future Outlook

From the earliest period of STOU's existence, it has been abundantly clear that distance learning has a very important role to play in life-long education, especially in a developing country like Thailand where resources are limited. It has also been equally clear that existing conventional universities cannot handle the influx of high school graduates without major expansion of physical facilities. In terms of generating national interest, STOU's use of distance education techniques to impart instruction and improve the quality of life in various ways constitutes a significant educational development that seems to have eclipsed other noteworthy innovations in the past decade.

Although it may seem premature to assess the success of this University which is only in its infancy, great progress has already been made and this despite the various constraints STOU has been faced with since its birth. From the outset, STOU has had to manage with whatever facilities it can have access to and to make use of them on either a rented or borrowed basis. Even now, after five years of existence, STOU is still waiting for its permanent home to be completed. Financially speaking, the University cannot possibly rely on the budget allocated by the Government which amounts to only 15 percent of the operating expenses. Without the fees collected from students, STOU would have been unable to make such headway and gain such momentum as is evident at present.

Though departing from all the other existing conventional universities in Thailand in that instruction is imparted at a distance and not in classrooms, STOU is nevertheless concerned with the kind of academic standards and excellence to be achieved and maintained just as much as any other Thai university. Despite special care and scholarship devoted to the preparation and production of course materials and radio and television programmes, it appears that some materials, judged adequately well prepared prior to being offered to the student, turn out to need revision after only one semester. Fortunately, STOU has a fairly effective system of feedback that enables course writers and those concerned with the production of teaching media to know the kind of additional assistance to be provided to students and to assess the success of the distance teaching materials they have produced. At the same time academic staff are encouraged to produce better self-instructional materials in order to make instruction more effective.

It should be mentioned, in this connection, that the innovations introduced by STOU have opened new possibilities for greater academic development and more extensive institutional collaboration. The course team structure has made possible the production of high quality texts since team evaluation is used at every stage of preparation and production. Only after various sessions of indepth consultation, intense discussion and close scrutiny will the manuscripts be judged ready for publication.

Brought together by STOU to various workshops so as to be initiated into the techniques of course material production and test development, academics drawn from various conventional universities have come to appreciate the viability of working and teaching in teams. This alone can be considered an innovation in Thailand.

The evidence confirms that the distance education methods used by STOU are quite effective. Although it may be too early to generalize about the quality of STOU graduates, since it was only in 1984 that the University had its first batch of some 9,600, there have been certain indications of unqualified successes, at least academically speaking.

It has been found that a number of STOU graduates have managed to gain admission into various graduate schools, some having scored much higher than graduates of prestigious universities in Bangkok. Some have even topped the list. In short, their performance has been very encouraging.

There have also been indications of a high degree of acceptance on the part of the general public. STOU texts have been widely used by students at conventional universities, and its radio and television programmes have been well accepted as informative and instructive. Its television programmes, in particular, have attracted both child and adult audiences throughout the country.

It should be pointed out, however, that the distance education system used by STOU is still in the experimental stage. Much remains to be revised and reorganized to meet the needs of students and the general public. Although STOU academic staff find no cause for complaint about the level of motivation and enthusiasm on the part of the students, the majority of them being working adults, the success of this University which has committed itself to distance education still depends on various factors. It depends, among other things, on an efficient postal service to cope with the future increase of students, on the effectiveness of relevant support services to be provided by various agencies, and on there being continuing financial and political support.

NOTE: Due to space limitations, the nine data tables provided with the original text are not reproduced here.

INNOVATIONS IN DISTANCE EDUCATION APPLIED TO THE PROFESSIONAL DEVELOPMENT OF TEACHERS: A CANADIAN PERSPECTIVE

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In this paper we present in brief compass a definition of distance education and consider a rationale for it both in pragmatic, problem-solving terms and in relation to a larger view of society. We then present in somewhat greater detail an overview of the Canadian context: geographic, political, educational and technological.

Our purpose is to address contemporary innovations in distance education applied to the continuing professional development of teachers. To do that we present applications in British Columbia, Canada's westernmost province, as a case study illustrative of Canadian practice. Satellite-delivered telecourses focused on professional development needs arising from changes in educational policy and practice are the main feature of recent developments. These are described in the context of traditional approaches and emerging experiments.

Finally, we reflect on the potential impact of distance education in the professional development and recurrent education of teachers, concluding that with the tools at our disposal, the contributions we can make to equalizing opportunity may be modest but they are not negligible.

Distance Education

Definition

The literature abounds with definitions of distance education, a term which has emerged in recent years to incorporate the extension to audio, radio, television and telephone communication from a primary dependence on the written word associated with correspondence education. Most definitions are descriptive and seek to differentiate distance education from other forms of education. Sims uses the more traditional term:

> The unique and distinguishing feature of correspondence education is that the learner is at a distance from the teacher for much, most or even all of the time during the teaching-learning process.(1)

Holmberg(2) acknowledges the centrality of the separation of teacher and learner to any definition of distance education but gives equal weight to the organizational planning and administrative procedures necessary to support the activity.

Peeters(3) departs from descriptive definition to take a philosophical position characterizing distance education as "a form of study complementary to our industrial and technological age". He uses the concepts of industrialization heuristically to examine distance education which he sees as reflecting such principles and characteristics as rationalization and division of labour, mechanization and automation, mass production, planning, control, standardization and centralization.

Learner autonomy is a major theme in the literature(4, 2) -- autonomy not merely in choosing what to study, but in pacing. So much emphasis is given to autonomy that some decry the use of scheduled broadcasts or adherence to pacing -- elements which rob the student of autonomy. Nonetheless all writers recognize the importance of providing the learner with support in the form of well-designed materials, access to tutorial and counselling assistance, and efficient and personal feedback on performance. The pacing provided by scheduled broadcasts and other means may be viewed as merely another form of support.

Keegan's(5) definition is one of the most widely cited. He stresses six main elements:

1. the separation of teacher and learner which distinguishes it from face-to-face lecturing;

2. the influence of an educational organization which distinguishes it from private study;

3. the use of technical media, usually print, to unite teacher and learner and carry the educational context;

4. the provision of two-way communication so that the student may benefit from or even initiate dialogue;

5. the possibility of occasional meetings for both didactic and socialization purposes;

6. the participation in an industrialized form of education.

When Keegan's paper was published in Australia, Baath(6) responded in the same journal rejecting the last two of Keegan's elements as nonessential.

Homberg's(7) concepts of guided didactic conversation has given coherence to his writing on distance education for more than two decades. Essentially, he sees as ideal a simulated conversation between student and course material and a real conversation between student and tutor. From this concept and its underlying postulates flow helpful guidelines for the production of course materials and the administration of distance education.

Rationale for Distance Education

On a simple, pragmatic level the development of distance education on a large scale can be seen as a response to perceived needs and demands for access to education. Certainly it is a movement which supersedes many cultures and political persuasions. For example in 1972, Brazil, through a satellite link between its National Institute of Space Research and Stanford University in the U.S.A., supported the exchange of technical documents and televised classes. Since 1979 U.S. medical teams link with medical teams in remote areas of Brazil for medical consultation.

Indonesia, the South Pacific region and India all have educational programming which uses communications satellites to provide interactive communication among people in distant communities.

The Soviet Union is thought to use its Intersputnik system for educational purposes in the German Democratic Republic, Hungary, Bulgaria, Poland, Czechoslovakia, Mongolia and Cuba.

Tele-education courses are being developed for broadcast using the L-Sat (Large Satellite) developed by the European Space Agency. West Germany and France are developing their own experimental programs for satellite delivery. The U.S.A. has utilized satellite technology to provide educational programs, particularly in such sparsely populated areas as Alaska, Appalachia and the Rocky Mountain regions(8). The foregoing examples all use one of the more recent technological developments -- communications satellites -- for distance education delivery. One need only look at the growing list of distance teaching universities, from the Central Broadcasting and Television University in the People's Republic of China to the Universidad Nacional de Education a Distancia of Spain and from the Open Universities of Thailand to that of the United Kingdom, to see that distance education has become a major element in the drive to enhance access to education.

Underlying these efforts is the notion that education is one of the keys to obtaining whatever rewards a society has to offer. Woolfe(10) cites Pratt describing the major objective of the Open University as being "to offer opportunities to educationally underprivileged groups" and Burgess as characterizing its purpose as being "to mitigate social inequality".

Many liberal social activists encourage such social engineering in the interests of ameliorating the impact of systematic exclusion and deprivation. The fallacy according to more radical scholars and critics lies in assuming that social mobility will follow from enhancing educational opportunities. These critics observe that the low-paying jobs held by 60 percent of the population in advanced capitalist countries would still be held by 60 percent of the population even if there were a general educational upgrading of the populace and a substantial number would still be condemned to poverty. Such scholars would characterize the development of junior colleges, for example, as a mechanism not for democratizing education but rather for maintaining a class-based tracking system. Similarly the provision of distance education, because it ignores the need to restructure social institutions, could be interpreted as a mechanism for social control rather than social change.

Trow(9) criticized the objectives of the Open University:

> . . . the roots of social inequality lie in the distribution of property and income and are better attacked by social policies aimed at the economic basis of class. It is possible to try to mitigate the social inequalities in educational opportunity, but the further along one moves in the formal educational system, the more one is dealing with the educational consequences of past and present social inequality -- and these stubbornly persist.

Reviewing the evidence concerning the Open University's contribution toward reducing inequality, Woolfe(10) noted that the proportion of working class students increased over the first several years and that if one considered father's occupation as the criterion of social class, a much higher proportion of Open University students (52 percent) than conventional university students (29 percent) came from working class backgrounds. He concluded that although the Open University reflects many of the inequalities found in society, education should not be considered an important force. Not only does the institution serve social mobility but it points towards mass education and thus is capable of contributing to a self awareness which will enable people to challenge the basis of an economic system which produces inequality and deprivation.

Later in this paper we present examples of the use of distance education in British Columbia, Canada, particularly in the continuing professional development of teachers. In that context differential access is illustrated graphically in the fact that although the Province has an extensive system of universities, colleges and institutes, the higher education participation rate for young people from non-metropolitan areas is exactly half that for the metropolitan areas. Distance education is seen as an important element in equalizing access. For a university in a metropolitan area, distance education is a desirable alternative to the travelling faculty approach to inservice education. It provides a coherent mechanism for placing additional power in our clients' hands in the form of knowledge and skills.

The Canadian Context

Geographic

Canada is a large country, second only to the U.S.S.R. in land area. Indeed, Canada is slightly larger than Europe. It stretches over 8,000 kilometers from the Atlantic to Pacific oceans and more than 4,000 kilometers from the United States border to the north pole. However, the great majority of its twenty-five million people live within three hundred kilometers of the southern border.

Although Canada's two official languages are English and French, immigration has contributed to rich cultural and linguistic diversity. For example, in Vancouver, Canada's major Pacific coast city, almost half the school children come from families whose first language is neither English nor French but one of more than fifty other languages.

The province of British Columbia is Canada's third largest. Sixty percent of its 2.75 million people are concentrated in the southwest corner of the province in the Lower Mainland surrounding Vancouver and on southern Vancouver Island around Victoria, the provincial capital. Since most of British Columbia's one million square kilometers "stand on edge" in mountanious terrain, the remaining forty percent of the population is in many centers separated by vast wilderness areas.

The climate of British Columbia's southwest coast is moist and moderate, that of the central interior less so, while the province's northern interior experiences extreme contrasts between summer and winter.

Political

Canada's federal system, maintained in its new 1982 Constitution, incorporates a division of powers between a federal government and the governments of ten provinces. Territorial governments in two northern territories have less autonomy than the provinces and we are still exploring whether it is feasible for various aboriginal peoples to constitute "nations within a nation". Immigration is a shared power which all but one province leave to the federal authorities. Communications is also shared but again the federal government plays the dominant role. Education, on the other hand, is explicitly a provincial responsibility although the federal presence is felt in relation to official language policy and in the funding of higher education which is seen as a matter of national interest. Funds for higher education are, however, transferred from the federal to the provincial governments and provincial allocations to the universities and colleges may not be commensurate. Nevertheless most educational initiatives are provincial.

Successive governments in British Columbia have supported policy initiatives designed to improve access to education. Genuine idealism has often been a motivating factor but it is not irrelevant that it requires the support of fewer electors to return a representative to government from a rural region than from an urban one. Access to services including education may well be worth votes.

Education

More than half a century ago British Columbia experimented with the use of radio in education extension, adding that medium to a substantial correspondence program. Institution building was the preoccupation of the 1960's as the number of provincial universities jumped from one to three and a system of colleges and institutes was established.

The 1970's, in spite of changes in government in 1972 and 1975, saw a continuous emphasis on the development of communications policy and an interest in finding ways of overcoming social and geographic barriers to learning. Only one college, however -- North Island College -- "fully accepted the challenge and established itself as an open learning system using a learning centre approach with no central campus."(12) Satellite tele-education experiments were launched in 1977 using Hermes, a joint venture of NASA and the Canadian Department of Education. In a two-month period universities and colleges broadcast sixty-four hours of colour programming with provision for instructor-student interaction via a telephone linkage.

The Open Learning Institute was established in 1978 as a distance teaching institution. It gave primary emphasis to correspondence courses with adjunct audio- and videocassette materials and telephone tutoring. Two years later the Knowledge Network was founded, not as an educational institution per se but rather as a telecommunications network. By this time Canada's own ANIK-B had been in place two years in geosynchronous orbit 36,000 kilometers above earth. Signals beamed to the ANIK-B could be received anywhere in its "footprint" using inexpensive receiving dishes. Broadcasts originating in Vancouver could be received throughout British Columbia, and the Yukon Territory and in portions of the neighbouring province, Alberta, and the Northwest Territories. Initially receiving stations were established in regional centres, often at a college or secondary school.

Recently an interactive television microwave network has been established to link institutions. Primary applications are the linking of the teaching hospitals with the university of British Columbia's Health Sciences Centre and the law courts with the Faculty of Law at the University of British Columbia and the Department of Criminology at Simon Fraser University. Linkages between the universities have thus far been used only experimentally.

Technological

In describing the emergence of new institutions and the linking of existing ones we have alluded to the technology in use. The Knowledge Network now uses the ANIK-C 14/12 Ghz satellite (Canada's new satellite launched by the space shuttle "Columbia" in December 1982), for community cable television, microwave and broadband cable. It provides 98 hours a week on its public television service to 150 communities. The colleges, institutes and universities, individually and collectively, develop and broadcast programming with the cooperation of the Knowledge Network.

In a mountainous region like British Columbia satellite transmission offers the advantage of eliminating the need for complex microwave and cable relays. Transponders receive signals and beam them back to the earth. Each transponder can relay one television channel on 1,200 voice channels(13).

Knowledge West provides the capacity for closed-circuit satellite video-conferencing, data networks and electronic publishing. Its broadband closed-circuit service links institutions with two-way video, audio and data units(12).

Distance Education in the Continuing Professional Development of Teachers

Twenty-eight thousand teachers staff British Columbia's elementary and secondary schools. Continuing professional development opportunities vary greatly when one contrasts the concentration of more than 10,000 teachers in the Greater Vancouver region with the dispersion of 3,000 teachers in the Central and Northern Interior over an area greater than the size of France. Distance education has long been attractive as a means of providing access.

Traditional Correspondence Courses

In the 1950's and 1960's the universities faced the challenge of training enough teachers to staff schools bursting with the children of the post-war baby boom. The University of British Columbia mounted one- and two-year "emergency" programs for elementary teachers. Indeed, many partially trained teachers taught in high schools as well. These teachers worked toward degree completion through every means available. Summer sessions had huge enrolments and extramural courses were taught by travelling instructors with extra classes to make up for those cancelled when weather grounded flights. A constant element for many was the correspondence course -- either academic or professional in emphasis -- with its duplicated "papers", extensive reading and often delayed communications via rural mail service.

By 1970 most teachers entering the profession held a baccalaureate degree and their need for undergraduate correspondence courses was less than that of their older colleagues.

Guided Independent Study

Successive revisions of correspondence courses have led not only to relabelling them but to the emergence of guidelines for their development. Curriculum developers assist faculty members in the process and audiovisual adjunct materials enhance the presentation of course material. The addition of telephone tutoring is yet one more factor in enhancing the quality of what Holmberg describes as "guided didactic conversation"(2,7).

At the University of British Columbia four courses of the Adult Education Diploma program (Institutions of Adult Education; Developing Short Courses, Workshops, and Seminars; Introduction to Adult Education; and History of Education) are offered by Guided Independent Study. The University has a contract through the Canadian International Development Agency to offer the Diploma Program in Portuguese in northern Brazil.

Satellite-delivered Telecourses

The University of British Columbia's response to the professional development needs of teachers, particularly those needs brought about by implementation of mainstreaming, is used as a case study to illustrate contemporary applications of distance education.

Need. Whereas teacher interest in degree completion, both for academic and for salary purposes, provided much of the impetus for earlier distance education programming, more recently the impetus has arisen from changes in public policy affecting teachers.

The provision of care and treatment for people with handicaps has undergone major changes in recent years. In the past, many children with handicaps were forced to leave their home communities in order to obtain services related to their handicapping conditions. These services were usually provided in specialized facilities that contained colonies of persons with handicaps. Parents who kept their handicapped children at home were faced with limited support. Services that non-handicapped children took for granted such as child care, education in public schools, recreation and other support services were often denied for persons with handicaps. If services were available locally, they were very limited and were commonly provided in special, segregated settings.

Powerful social, political, legal and ideological forces are bringing about significant changes for persons who live with handicaps. First, efforts are being made to keep persons with handicaps in their home communities. Second, an increasing number of agencies that serve non-handicapped persons are opening their doors to persons with handicaps. In many areas, local schools are leading the way. In schools, the trend is to integrate students with handicaps into regular schools where students with handicaps join non-handicapped students in a limited number of classes and activities. An increasing number of students with handicaps are showing up in regular classrooms where their education and training is the responsibility of the regular classroom teacher.

As the Special Education doctrine of integration spreads, many regular classroom teachers are recognizing the need to become more familiar with the characteristics of children with special educational needs and the teaching and learning procedures that have been developed in special education.

Unfortunately implementation of the mainstreaming policy has coincided with a period of fiscal restraint in public education. Therefore, specialized support services have not developed to provide the classroom teacher with assistance in meeting the special needs of particular pupils. This has resulted in a growing demand for access to training in special education for regular classroom teachers who lack training in special education but who are working with children that have special needs. In recent years the Faculty of Education has received numerous requests to provide training in special education for practising teachers. Recognizing the limitations of traditional correspondence courses and itinerant off-campus instructors, the Faculty of Education looked to television in an effort to provide quality distance education that is readily available to all practising teachers throughout British Columbia. In the Fall of 1980, the Faculty of Education gave priority to developing for live, interactive broadcast a 1.5 unit course entitled "An Introduction to the Study of Exceptional Children". In the Fall of 1982, this introductory course was followed by the development of a second 1.5 unit course entitled, "The Exceptional Child in the Regular Classroom". At the present time, the introductory course, Education 312, has been broadcast six times, and 405 teachers have taken the course for credit. The second course, Education 317, has been broadcast three times to 240 teachers. Information is presented below concerning the production, delivery and student evaluation of these two courses.

Course production, design and delivery. In order to produce video components for the courses, financial resources were provided by the Ministry of Education and the University of British Columbia. Within the Faculty of Education, three organizations cooperated to design, produce and deliver the courses. These are the Field Development Office, (needs identification, project coordination, advertising), Audio-Visual Services, (production and technical assistance), and the Special Education Faculty, (content).

The courses are offered for credit and for audit -- both of which require that students adhere to the standard admission and registration requirements of the University. In many ways, the two courses are similar in their design to the courses as they are taught on campus. Like campus courses, there are 15 sessions including 3 introductory programs, 2 concluding sessions and 10 programs covering hearing impairments, visual impairments, physical impairments, mental retardation, learning disabilities, behaviour disorders, health problems, speech and language disorders, cultural differences, and gifted students(14).

Since the broadcasts began, the material has been delivered in three different ways. Initially, broadcasts consisted of 60 minutes of pre-recorded material and 60 minutes of interviews and live interactive segments. Scarce air time resulted in reducing live time to thirty minutes and recently, interaction with students has been eliminated from the live television programs and has been handled by toll free telephone access following the program. A typical format for a 90-minute program that includes an interactive segment is shown below.

Nature of Activity	Program Activity	Approximate Time In Minutes
Live Introduction	Announcements Introduction of content	5
Pre-Recorded Material	Philosophy and underlying	28 theory
	Characteristics of students with special needs	
Live Segment	Interviews with studio guests Questions and comments from viewers	13
Pre-Recorded Material	Programs and services for students with special needs	28
Live Segment	Interviews with studio guests	13
	Questions and comments from viewers	
Live Segment	Summary, wrap-up and introduction to next week program	3

Each series has a host to introduce and summarize the program, conduct interviews, and respond to questions from viewers who call the studio. Print resources for the courses include a Student Guide and a text. The Student Guide contains an outline of the course, instructions for the students, notes for each television program, additional reading references, and a description of reading and writing assignments. Program notes were developed after students complained that it was difficult to take notes and absorb the content of the pre-recorded segments. Each course contains 10 weekly written assignments, a major term project and a final two-hour, open-book examination. Weekly assignments are graded and returned to students as quickly as possible. Depending on postal service, turn-around time is three to five weeks. While traditional correspondence courses report high attrition rates, drop-out rates in these telecourses have been negligible. It is speculated that regularly scheduled weekly telecasts and weekly assignments combine to provide a pacing function that motivates students. Student reactions to education using television suggests that there are additional motivating factors inherent in television that may account for high completion rates in the courses. These factors are discussed.

Evaluation. In January of 1981, when the first telecourse was offered, teachers visited regional centers in order to view programs. Students often travelled long distances to reach these centers. By September of

1981, the majority of British Columbians could receive educational programs on their home television sets. At that point, participation increased from 33 students in January of 1981 to 128 students a year later, and students from every corner of British Columbia were taking courses for credit. From a technical viewpoint, the problem of access to education for British Columbians was solved. According to our most recent findings 78 percent of the students who enroll in the courses for credit watch the programs in their own homes. Although programs were regularly scheduled on public television every week, the autonomy of students is reflected by the fact that only 52 percent of the students watched the live presentations. They now watch the programs when it is convenient for them.

Having access to education and training opportunities is not the sole criterion for equality. If access was the only standard, then print material and correspondence courses would be sufficient. In many ways, the test for distance education programs is in relation to direct instruction in a classroom. In this regard, television instruction was adjudicated inferior to direct classroom instruction in two out of ten categories; student-to-student interaction and student-to-instructor interaction. On a five-point scale of from "much worse" to "excellent," sixty-five percent of the students during the five most recent broadcasts stated that instructor-student interaction was "worse" to "much worse" using television. Similarly, sixty-six percent of the students reported that student-to-student interaction was "worse" to "much worse" comparing television instruction to classroom instruction. Other categories that were measured included attention or alertness, rate of presentation or pacing, ease of note taking, use of visual aids, motivation to work, attitude toward learning, physical comfort and stress. In each one of these categories, student attitudes were significantly more positive toward distance education using television, than toward direct instruction in the classroom. Although there are many techniques that can be used to improve student-to-student and instructor-to-student interactions, it is predictable that direct instruction will always be superior to distance education in these two categories. Considering effective communication between people, there is no substitute for direct encounter. However, when all of the factors are taken together, it is clear that television instruction is an acceptable alternative to direct instruction. One of the powerful advantages of television instruction is the ability to present a variety of classroom demonstrations to the students in support of instructional theory. In the category of visual aids, 96 percent of the students rated television instruction superior to classroom instruction. Eighty-five percent of the students reported that they were more alert, 86 percent were more motivated and 95 percent reported that they had a more positive attitude toward television instruction than toward traditional classroom instruction.

One procedure that has been used to facilitate instruction is live interactive television. Due to scarce air time, this feature of the program has been eliminated in the most recent presentation of the two courses. Judging from the reaction of students to this feature, the decision to eliminate the live interactive segment may have been a backward step. However, it is interesting to note that only 27 percent of the students phoned the studios during the television program. In spite of this low response rate, 90 percent of the students considered the interactive segment to be useful, 93 percent reported that it was informative, and 77 percent stated that it was necessary. Many of the studio calls that were received during the program came from interested members of the general public who were not taking the course for credit but who were interested in the material. Many students who failed to call the studios during the program took advantage of toll free access to contact the instructor after the programs. This may reflect shyness or fear of exposure to the general public and to unseen classmates. In actual fact, the frequency of student-instructor interaction (27 percent) may not differ significantly from student-instructor interaction in a large classroom on campus. One should keep in mind that only 52 percent of the students taking the course for credit watched the programs at the broadcast time. Thus, approximately 50 percent of the students who watch the live programs have called the studios.

Another comparison of distance education procedures to activities on campus focused upon assignments, examinations, course load and registration routines. In each one of these categories students submitted high ratings favoring the design and organization of the telecourses.

Finally, students were asked to record their preference concerning time of day and day of week for broadcast scheduling. in the past, broadcasts have taken place between 9 - 11 a.m. on Saturdays, 4 - 5 p.m. on Wednesdays and 4 - 7 p.m. on Fridays. The most popular days of the week were Monday and Thursday, and the most popular time of day was between the hours 3:00 p.m. and 6:00 p.m.

Other uses. Having demonstrated the value of educational television, plans are underway to use telecourses on campus. Considering the high ratings teachers have given to instruction by television in all but two categories, it seems sensible to use the same videotaped material on campus and supplement these video segments with periodic, direct contact with students.

This model was successfully attempted in 1984. Although the results of this experience have not been fully reported, one comment from the students was that it seemed unnecessary to come together as a group to view the tapes. They appear to be asking for greater autonomy to schedule their viewing of the pre-recorded material. These videotapes will be used for all on-campus sections of these courses in the Fall of 1984.

In the community, single programs from the teleseries are frequently used to provide inservice education for teachers. Many local resource centres have copied the tapes and distribute them from their libraries for use by teachers. When the tapes are requested by local school districts, the University provides them at cost.

Current Developments and Future Directions

From a technical viewpoint, great strides have been made toward equalizing access to education and training in British Columbia. At this point, resources to develop new programs are meager and the number of programs available for use are limited. At the University of British Columbia four additional credit courses are at various stages of planning and production. They reflect reeds expressed by practising teachers in the areas of counseling, micro-computer applications in the classroom, effective teaching, and special education for all teachrs. One way to expand our library of programs is to engage in cooperative planning with other organizations and make use of material that is developed elsewhere. The problem with material that is developed elsewhere is that it may not be suitable for use in British Columbia. This problem may be overcome by careful planning and by including live segments to address local content.

Along with credit courses a variety of non-credit programs are also at different stages of development. They reflect current educational issues that face practising teachers in the province. While scarce air time is not a serious problem at this time, one might anticipate that it will become a problem as more organizations recognize the advantages of educational television. If technology fails to provide a solution to scarce air time, educational instruction should move toward independent study, mailing tapes and print material, and establishing periodic audio-communication between students and instructors. Ideally, the time will come when we can gain access to closed circuit two-way video and audio communication. At that point we will have removed a major barrier in communications technology.

Satellite-Delivered Non-Credit Programing

In addition to the credit courses described above, each year the University conducts a variety of non-credit activities on educational television.

The North American Teleconference on Micro-Computers involved interconnections between three Canadian universities and sixteen universities in the United States. The purpose of the teleconference was to share information concerning micro-computer applications in the classroom and to explore the feasibility of telecommuncations between educational institutions in North America. In British Columbia, the teleconference was combined with a one-day workshop that involved representatives from local schools, universities, colleges, the Ministry of Education and the provincial teachers' association. Representatives from every constituency indicated an interest in exploring the use of teleconferencing. In British Columbia, 53 people participated in the one-day workshop. Throughout North America, it is estimated that 15,000 people participated. The cost to British Columbia for participation was $4700.

One can easily see the financial advantages for information sharing using this technology that involved one-way video transmission from the Ohio State University, the originating site, to all participating sites and audio interconnections between all participating organizations. In general, it was considered to be a successful experiment.

The B.C. Teleconference on Young Writers was conducted jointly by the University of British Columbia and the Ministry of Education. It was designed to help teachers across the province implement a new curriculum area in local schools. Pre-recorded video segments were presented on educational television along with live interactive segments to train trainers in eight regions throughout British Columbia. Television programming was provided as support to workshop leaders in each region. Additional topics shown above reflected current issues in education that were of high interest to teachers. One of the significant features in presenting this material on public television is that, although the material was aimed at teachers, parents and children had access to it at the same time.

Two new tapes have recently been developed for non-credit programming in 1984-85. They focus on the concepts of community schools and individualizing education for students. Plans are underway to present these tapes on public television in conjunction with workshops throughout the province. By using television, this information can reach every corner of British Columbia simultaneously. Remote corners of the province are no longer destined to wait for two or three years to receive information which by then is out of date.

Teleconferencing

Teleconferencing refers to the use of telecommunication systems that enable a group of three or more people, at two or more locations, to communicate with one another. Three different forms of communication are usually included as teleconferencing: video-conferencing, audio-conferencing and computer conferencing. In the foregoing illustrations, attention has been focused on one-way video transmission and two-way audio-conferencing. In the following section, attention is drawn to applications in education of two-way audio-conferencing and computer conferencing. Audio-conference users may operate from telephones in any location or they may assemble in conference rooms that have special equipment. For audio-conferencing, users need telephone equipment with microphones and listening devices. For two or more persons at a location, conference telephone sets with loudspeakers are often used. A conference bridge is needed when there are more than two locations. A bridge interconnects the transmission circuits from each location. With this equipment, participants at every site can communicate directly with each other. It should be pointed out that successful audio-conferencing requires careful organization. In particular, like any well conducted meeting, there must be a chairperson with a clear agenda who directs the proceedings. Participants should be briefed concerning protocol and concerning the use of equipment. The advantage of audio-conferencing is that it is relatively cheap and easy to use.

Audio-conferencing using a telephone bridge was used to prepare on-site workshop staff for the British Columbia Teleconference on Young Writers. Four to eight people were present in conference rooms in eight different locations in British Columbia. A chairperson in the conference room at the University of British Columbia directed the interactions between the 40 participants. The outcome of a one and one-half hour session was a thoroughly briefed, on-site staff who conduct local one-day workshops that accompanied the teleconferencing. The total cost of the audio-conference was $450. To have convened such a training session in Vancouver would have cost approximately $8,500.

Another illustration of audio-conferencing comes from the University of Saskatchewan where it is used in the student teaching program. Throughout Canada recent reviews of pre-service teacher education programs have resulted in recommendations that the professional phase, whether undergraduate or postbaccalaureate, be no less than two academic years in length and include an extended practicum of 13 weeks or more. A common concern is that the theory/practice relationship be strengthened. Teacher education institutions and representatives of the teaching profession are re-examining their partnership and one byproduct is a reaffirmation of the importance of the sponsor teacher's role in teacher education. As a result some institutions, notably the University of Saskatchewan, are revising the role of university personnel to de-emphasize the direct supervision of student teachers. Instead the University will concentrate on enhancing the role of the sponsor teacher -- selection, training for supervision, orientation, coaching and liaison -- all designed to acknowledge the centrality of the sponsor teacher in the student teaching enterprise and to maximize effectiveness.

Frequently student teachers are scattered among many schools and districts. Indeed, exercising greater selectivity in the choice of sponsor teachers will make it even less likely that many student teachers (and therefore sponsor teachers) will be concentrated in one building. But sponsor teachers can learn from each other's experience. One recent approach has been to schedule teleconferences with a dozen sponsor teachers in their home districts and one or two university resource people. Sponsor teachers, who have undergone earlier training in clinical supervision, are invited to share their supervisory experiences. The opportunity to consider critical incidents and to learn from the experience of colleagues is highly valued. The technology of audio-conferencing allows a group to be reconvened at modest expense and over long distances and is, therefore, playing an important role in the movement to enhance the role of the profession in the induction of new members.

Computer Networking and Electronic Mail

At this time all 75 school districts, the provincial School Trustees' Association, the Teachers Federation and the Ministry of Education have access to each other and to a variety of institutions in other provinces through a computer network. Many of the applications relate to administration and to collective bargaining and could be characterized as electronic mail. However, computer network conferencing takes place to a small degree within particular groups of specialist teachers. Using this technique, any member can access the computer file, read messages added, and reply or send messages to others. In some districts teachers use the computer network as a means of gaining access to model lesson and unit plans and of sharing resources for teaching.

Summary

The emergence of powerful new modes of distance education has enabled U.B.C.'s Faculty of Education to concentrate its outreach on particular subjects of social and educational priority, and to withdraw support from much individual, repetitive activity. The use of video material has made possible the documentation of exemplary practice thereby increasing the potential for bridging the gap between theory and practice. Furthermore it has assisted in the development of programmatic approaches to professional development in collaboration with the Ministry of Education and local school districts.

If education is to be empowering, rather than merely transmitting, it must raise the awareness of those who participate. We have chosen to give priority to enabling teachers to support the development and education of children with special needs. In so doing we are expressing a commitment to use the most powerful tools at our disposal to reduce inequality. As with all real education it is clearly a political as well as an educational process.

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OVERCOMING THE TYRANNY OF ISOLATION: EXCELLENCE IN TEACHER EDUCATION AT A DISTANCE, AN AUSTRALIAN EXPERIENCE

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Introduction

"Distance is as characteristic of Australia as mountains are of Switzerland."(1, p. ix) So wrote an Australian historian in a work which reflects upon the contribution of distance or isolation as one of the molds that have shaped the Australian experience. This paper summarises the impact of distance and isolation on the provision of education, and more particularly on teacher education in Australia. But whereas Blainey equates isolation with distance, this paper proposes that in the Australian experience isolation has developed from factors which lie outside the usual meaning of distance. This paper goes on to indicate how Deakin University's distance education programs are diminishing the tyranny of isolation by offering teacher education of excellent quality.

The Australian Context

The fundamental influence of Australia's physical and climatic features on the experience of its people cannot be denied. Australia's total surface area of about 3 million square miles is almost as large as that of the United States of America, excluding Alaska, and it spans three time zones. Most of Australia is desert; 39 percent of the total area lies within the tropics, the rest in temperate latitudes. Sixty percent of the continent receives an average annual rainfall of less than 15 inches and 39 percent receives less than 10 inches. The powerful influence of this harsh, dry landscape is evident in Australia's art and literature; much of its history is the account of Europeans occupying and coming to terms with an alien environment(2, Ch. 1).

Throughout this history visitors to Australia have been surprised by the curiously large city population; they expected "robust farmers, shepherds, cattlemen, gold diggers, and bush-fellers," and thought "the urban colonist almost an anomaly"(3, pp. 35-37). Today, although there is evidence that the growth of city population and the decline of rural population has steadied, seventy percent of the Australian population live in the national capital, the six state capital cities and four other major cities of 100,000 or more. Of these only Canberra is located inland(4, p. 121). This leaves only 14 percent living in rural areas. The major sources of employment are manufacturing, commerce and the provision of services; less than ten percent of employed people work in agriculture, forestry and mining. Population density ranges from 7,000 per square kilometre in Sydney to 2 per 100 square kilometres in the inland(5, p. 47).

Economic, social and political factors combine with geography to create and sustain this demographic pattern. The first settlement of Australia in 1788 resulted from the British practice of dismissing convicts and the redundant poor to a place far away. The discovery of the grasslands and a strong demand for fine wool provoked the rapid and uncontrolled spread of the pastoral industry and created a frontier society of estate owners, town merchants and rural workers. The gold rushes of the 1850's set off a startling explosion in population which in time led to demands for breaking the sheepruns into small farms. But the environment -- political, social, geographic -- rejected the creation of a nation of yeomen; disillusioned settlers retreated to the coastal cities to find work in the protected manufacturing industries.

At the turn of the century, as road and rail transport developed, farming methods improved, refrigeration increased access to markets, and the number of farms increased. Country towns grew in size and number. Coastal cities, now the hubs of rail networks in each state, inflated even further. The basis of Australian society had been fixed: the pastoral, farming and mining industries continue to make vital contributions to the economy but except for the coastal capital cities in each state and a few provincial cities, the landscape is thinly scattered with small rural townships serving the grazing, farming and, to a lesser extent, mining industries. In 1939 a prominent Australian poet expressed a commonly held view of the relationship between the capital cities and the rural outback:

> . . . her five cities, like teeming sores each draws her:
> a vast
> parasite robber state
> where second hand Europeans pullulate
> timidly on the edge of alien shores(6, p. 190)

Providing schooling was a problem, particularly in supplying suitable teachers for the children of the frontier as it shifted in search of gold or better land. Church schools, established by separate Christian denominations, provided for cities and large towns. But the low numbers and itinerant character of children in rural areas led to small schools competing for pupils. Many children were without any education. On goldfields, children were taught in tents, and schools were dragged by bullocks from one pioneer farming settlement to the next. Despite these innovatory solutions, illiteracy reached alarming levels and in the 1870's state governments legislated to enforce free, compulsory and secular education to the age of fourteen. Though at the time the problem of supplying sufficient buildings overshadowed the problem of providing suitable teachers, the supply of adequate, well qualified teachers both for the remote inland and the coastal cities has been a constant problem.

The weaknesses in the teaching force had been recognised well before the expansion of schooling envisioned in the 1870's. In 1851, one educationist reported, "I fear that a large proportion are by no means competent. Several are hardly able to write legibly, and many are ignorant of all but the first rules of arithmetic"(7, p. 791). Of 120 teachers only 5 had been trained in normal schools and only 34 had taught before. Before 1870, attempts to provide training in institutions were spasmodic and covered only a small minority of teachers for a short period.

In the years after 1870, the parsimony of governments promoted the peculiar notion that the quality of the teaching profession had little bearing on its products. At times of economic stress (e.g., the commercial depressions of 1890 and 1930), training colleges only recently opened were closed as one of the first economies. Even though in 1874 two years of training were proposed -- one in schools and one in a teachers college -- up until 1940, the majority of primary teachers entered the profession without spending a year in college. And it was not until 1951 that entry to the profession through student teaching was abandoned and a two-year course in a State Teachers College introduced. The course was extended to three years in 1969, and the entry level raised to matriculation. Promotional opportunities for primary teachers are tied to years of approved training: four years are prescribed to qualify for the most senior posts and to obtain maximum salary increments at each of four levels. As only three years of teacher education are offered at the preservice level, primary teachers with three or fewer years of approved training must attend a College of Advanced Education or enroll with a college or university that offers off-campus or distance education programs if they aspire to increased salaries or senior positions. For many years, Education Departments provided correspondence courses for primary teachers to improve their qualifications to the four year level, but they have now been discontinued. In Victoria, a four-year preservice course, proposed as long ago as 1969, may be introduced in 1986.

Teachers are distributed across the Australian landscape wherever there are children to teach. Three scenarios are common: farming districts, country towns, coastal capital cities. Each of the three settings generates isolation for the teacher who seeks to improve qualifications, though the nature and causes of the isolation are different in each.

Farming districts vary with their geographic location and with the branch of farming -- dairying, grazing, fruitgrowing, cereal growing. But the school and community hall with tennis courts and sports ground are the center of social life for a district with a likely radius of ten to fifteen kilometres or more. Depending on the enrolment, the school may be staffed with one, two or three teachers. The Principal may be married and live in a departmental residence but other teachers may board with a farming family or drive from the nearest country town. Schools serving a country district may be many kilometres from a country town which, in turn, may be forty kilometres or more from a capital or provincial city with a college or university. Attitudes in rural districts are known to be traditional with more stress placed on practical skills than on intellectual and educational attainments some teachers suffer from a cultural and social isolation as well as the isolation of distance.

There are more than three hundred country towns in Australia with a population less than five thousand; another one hundred have populations reaching to twenty five thousand. One writer has attempted to capture their sameness and their diversity.

> Country towns in Australia are generally small, parochial, and incurably old-fashioned. Many consist simply of a main street flanked by weatherboard houses which peter out into the surrounding bushland; farmers' utilities and Land Rovers are angle-parked outside the pubs and stock-and-station agents' offices, a few horses are tethered under the shade of trees in the main street. Others are thriving inland cities complete with supermarkets and lines of electric light globes strung along the shopfronts, but they are the exception.(8, p. 168)

Country towns may support only one school with a staff of four or five teachers or two or three schools with up to ten members of staff. Isolation derives from distance and from social and cultural difference between the teachers and the established town community.

It has already been indicated that Australia is one of the most highly urbanised countries in the world. But the most remarkable thing about Australian cities is not so much the size of their population but their sheer sprawl. Around the commercial and trading centre of the Australian city there is a ring of old residential suburbs, sometimes reduced to slums, which are being redeveloped or restored because they are so close to the city's heart. The spread of suburbia surrounds this completely.

> Finally, in the vast outer ring, comes suburbia: hundreds of thousands of red brick bungalows with liver-coloured tile roofs, mass produced weatherboard houses, fibro cottages with galvanized iron roofs, each set in its own block of land with a lawn out the front and a garden out the back.(8, p. 124)

Australian suburban society has been tentatively called "a loose federation of sovereign and equal household states"(9, p. 19), where social and physical cohesion have been sacrificed for privacy and space standards. Suburbanization moved ahead of transportation facilities and public services of water, sewerage, drainage and power, not to mention community services such as colleges, schools, churches and community centres. Melbourne, with a population of a quarter that of London, covers an area twice the size; suburban Sydney spreads over more than six hundred square miles. In retreating from the outback, Australians chose to create their own Arcadia.

> What the Australian cherishes most is a home of his own, a garden where he can potter, and a motor car. . . as soon as he can buy a home he moves to the suburbs. This accounts for the enormous size of Australian cities . . . (10, p. 40)

The Australian expresses his selfhood through being master of a private limited world, populated only by a single nuclear family enclosed within the boundaries of a suburban lot.

Isolation in the cities derives from this state of mind and is confirmed by the lack of services, particularly public transport, in the suburban sprawl. The teacher working in an outer suburb of Melbourne or Sydney is confronted by a thirty kilometre drive on congested roads with only dubious chances of finding a spot to park upon arrival. Travelling to evening lectures is time consuming, costly and hazardous. It is believed that this "privatization" of life in suburban communities is being confirmed by social trends which, on further investigation, will provide more refined explanations for increased interest in distance education by teachers and others: a sense of needing to belong and to be accepted by an organization with status; technological changes which will improve teaching-learning media and make study in the home more effective and congenial; the impact of the drive for new roles for women; the increased comunity interest in "life-long" or "recurrent" education; a competitive market for teacher employment and increasing credentialism strengthening the desire, or necessity, to upgrade qualifications(11, p. 47).

As well as being isolated by location, teachers suffer further disadvantage because they are adults and subject to the same severe constraints experienced by all adults who wish to improve their post-secondary education(12, p. 5). Since adults work, nearly all the programs provided by conventional, daytime colleges and universities are inaccessible to them. Adults have families; teachers who can attend conventional colleges or universities regret that they must neglect their families to do so. Adults, especially teachers, want to learn in their own style very often this means sitting at home in their own time, working at their own speed.

In addition to isolation born of location and of adult status, research indicates that some students, when offered a choice between the same program taught at a distance and taught in a conventional setting, will choose to study at a distance. Distance education is more flexible in its use and more adaptable of access to its public; it offers a personalized approach to education for those who are dissatisfied with group education and it commits a student to accept responsibility for his own study program. Distance education can generate its own students, attracting teacher-students who would not enroll in programs in conventional institutions -- a critical factor for colleges and universities with falling campus enrolments.

Deakin University

This was the setting when Deakin University was established in 1974. Agitation for the separation of the teacher educating and employing roles of Education Departments was successful in the early seventies. Eventually most primary teacher education institutions were amalgamated with Colleges of Advanced Education, but, at Geelong, a College of Advanced Education and a State Teachers College joined to form the foundation of Deakin University.

Deakin University is in the city of Geelong in the Australian state of Victoria. Geelong is about 80 kilometres south of Melbourne, the state capital. As it is the only institution of higher education in the region, it has a responsibility to teach on-campus students as a regional university as well as to fulfill its mission in distance education. Deakin is the only university in Victoria not located in Melbourne; the three Melbourne universities are Melbourne, Monash and LaTrobe. It was the last university to be founded in the period of burgeoning growth in higher education in the 1960's and early 1970's. Whereas in 1950 there were eight universities in Australia, by 1975 there were nineteen. Vigorous growth in the college of advanced education sector occurred in the same period. Measured by size of student load, Deakin University is the twelfth largest and second only to the University of New England in the number of students enrolled in external studies. Queensland, New England, Macquarie, Deakin and Murdoch Universities are the five major providers of external studies programs. Deakin was officially opened in 1977, enrolled its first on-campus students in 1977, and its first off-campus students in 1978.

The Act by which Deakin University was established includes specific reference to off-campus studies, requiring Deakin, "to provide tertiary education at University level for students attending the University and to provide the opportunity for tertiary education at University level to all qualified persons whether within or without Victoria by means of external studies programs," and even more specifically requiring Deakin, "to arrange for the provision of study centres at Ballarat and Bendigo and other appropriate places in Victoria where students taking external studies programmes can have access to library and other study facilities and can be given tutorial and practical assistance." Deakin accepted its brief with an enthusiasm generated by a firm belief in the value of distance education; the staff of the School of Education, recognizing that off-campus studies were the means of diminishing the isolation which inhibited teachers' professional development, accepted the brief as a mission rather than as a commission.

So, although Deakin had only 2,000 on-campus students when it opened, its enthusiasm for distance education was not merely making a virtue out of necessity. Some positive advantages were foreseen; these were listed in a paper by Deakin's Vice Chancellor, Professor F. R. Jevons, in 1981.

> Self-instructional materials provide a more consistent quality of instruction than the more erratic lecture system. Lectures range from charismatic performances which fire students with enthusiasm down to the legendary transfer of the contents of the lecturer's notes to the students' notes without passing through the minds of either. Unlike lecturers, learning and teaching materials do not have "off" days.(13, p. 5)

The use of self-instructional materials is in theory good educational practice. This was recognized specially by staff in the School of Education who felt that at last they would be able to practice what they had preached. Hitherto they spent much time standing in front of their classes telling their students that in a classroom they should not just stand in front of their classes telling them things. Now they would be able to encourage learning through activities, just as they wanted their student teachers to do in turn when they got out into schools.

The radicals amongst the staff saw the new mode of teaching as a means of liberation. Students would be liberated from the constraints of the traditional lecture and tutorial system, using the materials as resources in their own way and in their own time. Academic staff would be liberated from the lecturing grind and free to use their teaching time in more interactive ways. The authoritarian element in teacher-student relationships would be weakened and students could use staff as human resources.

It is not surprising that in a country where distance or isolation is regarded as a tyrant, that special efforts had been made well before the establishment of Deakin University. External studies at the tertiary level were first offered in the University of Queensland and the University of Western Australia in 1913 and 1921 respectively. It was not until 1955 that another university offered external studies: the University of New England, Armidale. What is most surprising is that in a country like Australia, despite the success of these universities, external study has had to wage a continuing battle to establish its credibility. Whereas face-to-face teaching is regarded as acceptable, desirable, or even necessary, in contrast, distance teaching is often regarded as unacceptable, undesirable and even unnecessary if it can possibly be avoided. The Chairman of the Distance Education Unit at Deakin University has characterized the fight for credibility of distance education as the struggle against "the tyranny of proximity" as opposed to the tyranny of distance(11, p. 2). Indeed, a report of the Australian Universities Commission by the Martin Committee in 1964 recommended that steps be taken to remove the conditions that make external study necessary, that Queensland and New England limit their enrolments and that expansion of external studies not be a university function. However, successive governments, aware that it is quite impossible to remove the conditions that make distance education necessary, added the provision of external studies to the brief of Macquarie University. When Deakin received a similar brief in 1974, its foundation staff were very much aware of its vulnerability to criticism on the grounds of standards and academic respectability. Some of its methods in developing and offering courses were selected specifically with establishing and maintaining quality in mind.

Defined in the most comprehensive terms, distance education contains the following main elements: the separation of teacher and learner which distinguishes distance education from face-to-face lecturing; the influence of an educational organization which distinguishes it from private study; the use of technical media, usually print, to unite teacher and learner and carry the education content; the provision of two-way communication so that the student may benefit from or even initiate dialogue; the possibility of occasional meetings for both didactic and socialization purposes; the participation in an industrialized form of education, which contains the genus of radical separation of distance education from other forms(12, p. 3).

The Deakin University approach to distance education contains all of these elements except the last -- distance education is not separated from other more conventional forms. An integrated mode was chosen, with university staff having responsibility both for a group of external and conventional lecture-room students. Monitoring and comparison of standards of off-campus and on-campus students ensures that the quality of both modes is maintained. It also supports the concept of an open university with students opting to take some units of a program in the off-campus mode and others in the on-campus mode according to their preferences.

Deakin University was strongly influenced by the distance teaching methods of the United Kingdom Open University which, since its inception in 1971, had earned an impressive reputation for the high academic standard and production quality of its courses. Deakin chose to produce a variety of high quality print materials supplemented by audiotapes which were provided for each student and videotapes which could be borrowed by students or viewed in study centres. Learning materials were supported by two means: study centres were established and regional tutors employed to lead discussions and respond to students' questions; university staff or regional tutors arranged telephone tutorials with students who were so isolated that they could not travel to a study centre.

But the most notable adaptation of Open University methods was in the organization of course teams to prepare learning materials. It was this method that gave Open University courses greater quality than their conventional counterparts. In the School of Education a large majority of staff work in course teams to plan, prepare, and teach courses, off- and on-campus. The involvement of academics of national and international reputation as consultants and writers during the development of course materials is a feature of the method. Classroom Processes, a fourth-level course, illustrates this amalgam of talents of University staff with those of other universities: six members of the Deakin course team prepared approximately half of the course with the advice of two consultants; the other half was prepared by ten external writers, seven of whom had professorial status and five of whom were from overseas universities in Britain, the U.S., and New Zealand. Individual members of a course team submit their contributions to the scrutiny and comment of other members so that all materials are evaluated and modified before being accepted for publication. Course team collaboration ensures that materials are of high quality in content, teaching-learning effectiveness, and presentation and production.

The first units or subjects offered by the School of Education in 1978 were prepared for teachers who had one, two, or three years of approved training and who wished to take a three-year degree (Bachelor of Arts in Education) or a four-year degree (Bachelor of Education). Units were grouped: discipline based studies such as psychology and sociology; studies more relevant to teachers' professional development -- classoom studies, curriculum studies, and social and administrative studies. Units of a program for the Graduate Diploma of Educational Administration were offered in 1981 to provide teachers with administrative expertise and to provide a preliminary program for entry to a master's degree.

Quite deliberately, the School of Education adopted a particular approach when preparing off-campus units: theoretical concepts introduced through learning materials -- print, audio, and visual -- are related by students to their community, school and classroom situations through assigned work which contributes to their assessment.

This interacting relationship between theory and practice was sustained in the development of Master of Education and Master of Educational Administration programs by course work and minor thesis when they were introduced in 1982. This was a further advance in breaking the tyranny of isolation for teachers who aspired to take a higher degree but whose location in rural district, country town or city suburb made it otherwise impossible.

In developing learning materials for the course work at masters level, the course team method was sustained but modifications in the learning materials were made. Materials consist of readings accompanied by relatively brief explanations of their inclusion -- how they contribute to the theme of the course. Course teams responded to the vital need to keep students studying articles based upon the most recent research work by presenting materials to students in different ways: materials for some courses were enclosed in ringed binders so that articles could be added and deleted; materials for other courses were bound into small booklets or modules which facilitated a rolling revision over a number of years. Masters courses are revised annually, whereas courses at bachelor level are remade every five years.

Both the need for teacher education at a distance and Deakin's success in satisfying it are confirmed by the number of teachers enrolled in off-campus programs. At both undergraduate and graduate levels quotas are oversubscribed. In 1984, 1,287 teachers were enrolled as students in off-campus programs. Although the majority of students (976) live in Victoria, 140 live in New South Wales, 34 in Australian Capital Territory, 35 in South Australia, 37 in Queensland, 15 in Northern Territory, 7 in Tasmania, 7 in Western Australia, and 36 overseas. Of the New South Wales students, half (66) live in Sydney, supporting the notion that isolation is as much a feature of suburban life as of life in the remote inland.

Conclusion

It is worth repeating that so much of the content of Australian history is the story of Europeans coming to terms with the alien environment and its strangeness -- the immensity of the continent, its aridity, its sameness. Farming methods transported from Europe failed to solve the problems of settling marginal agricultural lands: traditional European forms of education may not be the complete answer to achieving optimum access to tertiary education in the Australian context. Distance education at the tertiary level can be viewed as another example of a people very belatedly getting to know and coming to terms with their environment.

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SECTION V

International Dimensions in Teacher Education

INTERNATIONAL DIMENSIONS IN TEACHER EDUCATION
CHAIRMAN'S COMMENTS

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Good morning, my name is Bill Gardner and I'm to act as chair of this eighth plenary session of the ICET World Assembly. The topic for this plenary session is "International Dimensions in Teacher Education." As we say in the United States, there are some good things and some bad things about this program. Let me mention one bad thing and several good things. The bad thing about the program this morning is that the speaker, Romeo Flores Caballero, from Mexico, was not able to come to the Assembly, nor did his speech arive at the Assembly. That is the sole bad thing. The good thing is that we have three panelists who have expertise and experience in discussing, working in and dealing with international dimensions in teacher education. They will each address aspects of the international dimensions of our topic following some very brief introductory comments, which I will provide. My comments concern basically international education. I believe that there are four propositions on which people in this room would agree.

The first of these propositions concerns the importance of international education for the children and youth who inhabit the schools in our countries. By whatever name we call this phenomena, whether we call it global education, world studies or international education, education about other people, the places in which they live and their ways of living, is of upmost importance to us all. The key facts, which must be understood, are those which are related to concepts of interdependence, to the interrelationships among the world's people, to the concept of spaceship earth where people are seen to share the same problems and to have the same stake in the solutions to those problems. I would hold that this content of international education is so important as to constitute an educational imperative for schools throughout the world. That's the first proposition that I believe we all believe in.

The second proposition concerns the forces which work against the teaching of international education, and I think there are several. Certainly the systems of education in all of our countries are supported by systems of politics. And there is much in our political systems in each of our countries which tends to encourage a national view, and which tends to discourage the development of international perspective. This makes it enormously difficult, more difficult than it should be, to institute effective programs of international or global education in our schools.

My third proposition is closely related to the second. There are very strong signs in each of our countries, I believe, that the results of our efforts to teach toward an international perspective have not been very successful. In each of our countries there are signs that the basic message simply has not been received although it has been sent quite often. I know this to be true in the United States, and there are many things which I could say to illustrate this. Let me give you just one rather unusual illustration of how I know this to be true in my country. Several speakers at this Assembly have mentioned the report, "A Nation At Risk," which was issued in our country in April, 1983. This was the report of a national commission appointed by President Reagan to look into the status of education in the United States, to make some judgements about it, and to make some recommendations. This report sought to assess the quality of education in the United States, and I believe the report was exceptionally critical. It is interesting to read this report in an attempt to find some mention of what we would here call international education -- any of the international dimensions or aspects of education. They are simply not there. There is no hint or suggestion in that report that international or global education even exists. In fact, I would argue that this report, together with several other reports of a similar nature in the United States today, really encourages a xenophic rather than an international view. than an international one. The title itself is a very instructive title, what is at risk? It is a nation at risk. Now I suspect that those of us who are interested in international views in education could not really hope for a report in the United States entitled, "A World At Risk," or "A Globe At Risk," or even "A Hemisphere At Risk," but we could expect a little more attention to international education than what we got from this national commission. Further, when we ask, what is at risk in this nation, we find that according to the report the United States is really in danger of losing it's competetive position in world trade and commerce. The only mention of other countries in this report is as our competitors. I find that to be very disappointing and ironic, if not tragic. I suspect that each of you could point to similar events in your countries to illustrate the position of international education there.

My fourth and final proposition results really from the other three. It concerns teacher education and international education. If we expect global education to be implemented in schools in our countries, we need to revise and reform our programs of teacher education. We need to consider very carefully the international dimensions of teacher education and this is what our panelists this morning will do.

INTERNATIONAL DIMENSIONS IN TEACHER EDUCATION: THE ITALIAN POINT OF VIEW
PANELIST'S COMMENTS

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Sociological writings on education in Italy frequently refer to the comparative inquiry made by the International Education Association (IEA) in 1970-71. This represented the first testing of students' skills between the ages of 14 and 18 in nineteen countries. As you all know, American students ranked at a rather low level while Japanese and German students did much better. Italy, too, was involved in the study with 17,000 students who gave generally very poor results; their scores on scientific matters were entirely negative, often worse than those from underdeveloped countries.

Although the results of this study were a real shock for the whole country, very few concrete changes have taken place in the educational system. In 1979 another inquiry was made on 2,600 students attending the last form of the Upper Secondary School. Half of them followed traditional courses, while the rest dealt with experimental ones. The aim was to assess the changes that had occurred after the introduction of those experimental courses. The results were not at all assuring; in some parts of the country, competence in scientific matters among the experimental group had increased, but in others, the results from traditional courses were often better. These tests dealt with subjects from the so-called "common area" including mother tongue, history, civics, English, French, mathematics and natural sciences. And though the results were diverse in the various parts of the country, coming from samples of students of different ages, from different types of schools, and on different subjects, the assessment revealed a rather low level of accomplishment. A new IEA test will be administered very soon, but the expectations are again very low.

One of the most interesting innovations in the education field during the last five years has been the official introduction (DPR 419) of course experimentation of two different kinds: one dealing with changes in the curriculum, called "maxiexperimentation," and the other dealing with changes only in methodology and didactic approach, called "miniexperimentation." The expectation was that both types of experimentation would give concrete data on how and on what to concentrate teacher training in the context of a reformed school system. This innovation was also a good chance to stress the active and autonomous function of teachers within the changing Italian educational system.

In 1974-75, there were 58 experimental courses. After 1980-81, this number increased very rapidly, and presently there are more than 1,000 applications waiting for Ministry approval. The reaction of schools and teachers could be interpreted as a positive sign, but according to the Ministry's Technical and Scientific Committee (CTS), which was appointed with the tasks of controlling and piloting experimental courses, the increase in the number of requests is attributable to the economic advantages that come to the schools with approved experimental courses. According to the CTS, these attempts are very seldom scientifically based and well planned. Very often, the proposed innovations and methodologies are inadequate.

After the 1979 IEA inquiry, the President of CTS stated that sporadic and spontaneous experimentation would not work and that planning and testing at the national level was needed.

Testing is in fact one of the aspects that had been totally absent from this innovative phase. The CTS had neither the means nor the power to control the results. One other incongruity was that the function of assisting and piloting these experimental activities was the responsibility of the Inspectors, only 70 out of 100 of whom had teaching experience. This meant that they were inadequate both in number and background to oversee so many pilot projects.

Another negative aspect was that as projects were often passed from one Inspector to another, the results were often unreliable and incoherent. This was stated in an annual report by the President of CTE, who identified as well the need for recruiting additional Inspectors.

In September 1982, after 8 years of delay, 200 External Inspectors were appointed and assigned to experimentation in the secondary schools. Their role has not yet been defined, and they lack the basic necessities of their office. According to the decree signed in 1975, School Inspectors should be provided with offices, lamps, documentation and whatever else is useful to their task. Since February 1984, they have been required to operate independently, and a technical secretariat was to have been established to support their activities. These conditions have not yet been realized. In Rome, twenty five External Inspectors do not even have an offical place to meet.

Inspectors could provide a link on the one hand between schools and political entities, and on the other between schools and public administration. However, too many material obstacles currently impede their effectiveness.

Teacher Training

The main question of what type of educational system the Italian school should be based on still remains unanswered. Ought the system be student centered or teacher centered? Should it be centralized or under the control of local authorities? And within the pyramidal structure of the system, what ought the teacher's role and position be?

In Italy, at least during the last ten years, teachers have been given a central role, but very little has been done for their training. In general, they have been recruited without the benefit of a proper training course. On this particular problem, there was an OCSE pilot project in 1979-80, conducted by three experts. After that, a study was done by a commission of Italian experts named by the Ministry of Education. This research provided the basis for the Mencarelli Report, which tries to fix the aims and operative tasks for educational reform. According to the OCSE report, general statements had to be substituted by close analysis of specific problems. From this same pragmatic approach the Mencarelli Report tries to document the faults of the Italian primary school and why the secondary school is in such trouble; though some structural reforms have been effected in the lower secondary school, the results are still very poor because teachers are not yet sufficiently trained.

According to the same report, teachers must be trained at the university level, studying didactics and assisting trained teachers in real teaching situations. Interdisciplinary research on didactics should be undertaken as well within the universities, and educational laboratories should be increased in number.

Teacher Selection

It is well known that Italy experienced the highest increase in school population during the 1970's. This provoked a vast demand for teachers, who were recruited and hired without any kind of training. This sudden population growth accelerated the decay of our school system, which was the object of infinite and idealistic debates but of very few concrete changes. But now there is evidence of improvement.

With Decree 1074 of December 1974, "qualifying courses" were organized, and, with Law 477 140, thousands of auxiliary teachers were given permanent positions. This procedure, very seldom used in the past, became in 1978 under Law 463 the predominant way of recruiting teachers.

According to the OCSE report, 7,000 primary teachers in Italy became tenured on a competitive basis; the remaining 44,000 were selected by rule of law. Figures from the secondary schools are worse: 47,000 teachers were selected through competition and 385,000 by fiat. This recruiting system still persists; under the new Law 270, another large number of teachers will become tenured. There is now a trend toward reverting to the traditional competitive system, but it is based on those obsolete examinations that had been despised for so many years.

Inservice Training

According to the national teachers' contract, one tenth of all teachers (80,000) follow a training course each year. In 1982, many training courses were organizaed for those teachers that would become tenured after completion of the course. In many cases, the trainers were well prepared, and the courses were highly regarded; often, however, courses were poorly prepared and the subject of criticism.

Training courses were established under Law 477/73, and with these, the rules were fixed. They could be organized by the school teaching staff, by the local authorities in collaboration with the universities, or by the Ministry of Education. It was assumed that teachers would participate voluntarily, which they did initially. But the limits of this kind of approach soon became evident: lack of quality trainers, lack of motivation in trainees, lack of financial resources for good trainers, and lack of planning and preparation.

A study of the training process revealed that teachers who were interviewed after attending training courses considered them too theoretical, not well focussed, and of insufficiant length. In their opinion, courses should be made compulsory, rather than voluntary, should be more interesting, and should be scheduled in fixed periods of the year.

Regional and local authorities should be responsible for all training courses, but they are generally unprepared to do this, and the resources to provide training are unavailable to them.

Physical Facilities

The provision of school buildings in Italy is a serious matter that is very seldom attended to. The Ministry of Education has appointed a Commission to study this problem at the national level. Two reports have been produced: the first deals with the region Umbria Lazio, the second concerns all secondary schools in the country. From the former report we know that within the 20 districts of Rome, one-half of the schools do not have a teacher's meeting room, only three schools in ten have a library, one-third of the schools are being rented, and one school in four has less than ten classrooms. In the province of Frosinone, the situation is still worse. Eighty percent of the schools are rented, and hundreds of millions are spent every year for this. Twelve schools in eighty have a library, and only fourteen have a teachers' room. Eighty percent of the schools were built for purposes other than schooling.

In this area, which cannot be considered underdeveloped, there are secondary schools with only 120-150 students. A commission within the Senate is discussing a law by which 500 would be the minimum enrolment for forming a new school.

Reading the figures from an ISTAT report on this problem, the average number of classrooms per school, considering all types of schools together, amounts to five. This means that our resources are dispersed. However, this depends also on the country's geographic structure and on the reasonable intent of building a compulsory school wherever it is needed. In many small towns teaching facilities are few and teacher training does not exist at all.

Curricula and Programs

Our country is striving for new curricula and programs to produce quality education in our primary and secondary schools. This is a difficult task, mainly in the upper secondary school, where a general reform has been delayed for years.

A number of professional associations have been working on the problem.

The Committee of Italian Scientific Associations recently held an international symposium in Venice. The task of greatest importance was identified as redefining the profession of teaching and the characteristics of teachers. It was pointed out that in Italy there is a sort of Lyceum which does not fit the model in other countries, where scientific lycea have curricula that are based on scientific subjects, the teachers are well trained, and the laboratories well equipped. Didactic research is better structured too, and the link between upper secondary schools and universities is more effective.

Another association, the Union of Italian Methematicians (UMI), has worked for years in this direction conducting research in their university centers and in preparing teacher trainers. Very recently a commission was set up by the MPI to discuss changes in science curricula and programs. It was pointed out that notwithstanding its industrialized standard, our country is extremely backward in its educational system.

Public Support

An attempt to reform the upper secondary school was made in 1971. Since then, twenty additional reform projects have resulted in few changes. The first project was rather utopian in proposing to abolish head masters, to invent "units of school and real life experience," to extend compulsory schooling into the upper secondary level, to install cafeterias in every school, and to provide free transport and housing for students away from home.

A peculiarity of our upper secondary schools is that as a result of Law 910 (1969), the baccalaureate examinations were reduced to one-third of what they were before, without reference to attempts to reform the articulation betwen secondary and higher education.

The public has shown little interest in the decaying conditions of our educational system. When in July 1982 our Parliament discussed the reform bill on the Italian upper school, the public seemed completely indifferent and teachers displayed no interest. But after so many delays, public apathy is quite understandable.

Many other social variables should be taken into consideration to develop a complete view of our educational system and its troubled way towards reform. We are still far from our goal, but in the last fifteen years, the country has changed, and its collective awareness and social consciousness have produced many original ideas and excellent experiments in all fields.

An original solution towards the realization of quality in education in Italy should take into account not only examples from Western countries, but also from selecting wisely among the experiences in this country and other European nations. It is not necessarily true that the practices of industrialized and post-industrialized traditional nations are the only and best alternatives for a society striving for a new and more human ideal.

THE INTERNATIONAL CURRICULUM CONTENT FOR TEACHER EDUCATION PROJECT: PANELIST'S COMMENTS

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The International Curriculum Content for Teacher Education Project is a major writing effort being carried out at The Ohio State University under the joint sponsorship of the American Association of Colleges of Teacher Education (AACTE), The College of Education at The Ohio State University, and the National Council on Foreign Language and International Studies (NCFLIS). It is part of a larger project, "International Education in the Undergraduate Discipline," being funded and facilitated by NCFLIS. The primary purpose of ICCTEP is to generate a series of position papers designed to facilitate discussion and thinking about the responsibilities of teacher education programs for developing a global perspective in their students. A secondary purpose of the project is to collect syllabi of innovative undergraduate courses in teacher education which include a signficant amount of international content. It is anticipated that the syllabi will be disseminated to faculty members who teach such courses, with the hope that instructors will draw on these models when attempting to internationalize their own courses.

Following are the titles of the project papers and their authors:

"Global Education and the Secondary Social Studies Methods Course."
Dr. M. Eugene Gilliom
Professor of Social Studies Education

"Global Education: Why? For Whom? About What?"
Dr. Chadwick Alger
Professor of Political Science and Public Policy
Dr. James E. Harf
Professor of Political Science

"The Infusion of a Global Perspective in Teacher Education: Standards for Implementation."
Dr. Beverly Gordon
Assistant Professor of Curriculum, Instruction and Development

"Philosophy of Education and Global Education."
Dr. Richard N. Pratte
Professor of Philosophy of Education

"Global Education and the General Education of Teachers."
Dr. Gerald M. Reagan
Professor of Philosophy of Education

"Global Education in General Methods for Teachers."
Dr. Nancy L. Zimpher
Coordinator of Undergraduate Programs, College of Education

It is important to note that this project has been a cross-campus effort at Ohio State, involving not only faculty members in the College of Education, but two highly regarded internationalists from the Department of Political Science. Since the project was launched in June 1983, members of the writing team have met regularly to react to one another's ideas, to critique drafts in progress, and to sharpen their thinking and writing about their topics. In February 1984 at the annual meeting of AACTE in San Antonio, and again in May 1984 at the National Assembly, "Global Crossroads: Educating Americans for Responsible Choices," Washington, D.C., the authors appeared as a panel, sharing ideas and sharing reactions to the papers as they were emerging. In addition, each paper has been reviewed by colleagues from around the country and abroad. After a year of intense effort, the papers have now been completed and along with the report on the syllabus project, have been submitted to AACTE and the National Council on Foreign Language and International Studies.

As implied by the title of the project the basic concern of this collection of papers is with the perspective, prospect, and possible contributions of global education to the teacher education process. Some of the contributors have dealt with the need for making global education a vital part of the awareness and behavioral levels of teachers and students, while others have addressed the issue of whether the teacher can teach meaningfully a particular global condition. All speak to and explore opportunities for individual and societal growth inherent in the savoring of a global awareness and perspective.

The authors represent a wide range of professional interests, and even though a common definition of global education is presented, it has a different meaning for each writer. Therefore, the papers sometiems start from different points. For instance, one strategy was to tackle the task at the definitional level (Alger and Harf); other papers were written at the conceptual and philosophical level (Reagan and Pratte); two papers deal with issues related to curriculum or subject matter (Zimpher and Gilliom); and finally, one paper has been written at the implementation level (Gordon).

It should be noted that the papers have a hierarchial organization. They begin with a definitional approach to the problems or issues of a global system; next they move to the general education of teachers and general methods of teaching; then the subject matter fields of philosophy of education and social studies education are addressed; and finally, a number of standards are presented, focusing on the rationale for implementing a globalized teacher education program. It is hoped that this modest attempt at "consciousness-raising" about global education and teacher education, which is the essence of this work, will lead not only to a more generalized understanding and appreciation of global education but of its role and necessity in teacher education.

At this point we will consider briefly the rationale undergirding this work, and the need for infusing a global perspective into the teacher education program.

Although many definitions of global education abound, we took as our archimedian point that we need to deal with the world as a pervasive web in which nation-states and their peoples have become increasingly interdependent. We live in a world in which more people than ever before share a common history and are fated to share a common destiny. Thus, accepting this view, we defined global education as: those educational efforts designed to cultivate in the young a global perspective (the above stated imperative), and to develop and actualize in the young the knowledge, skills, values and attitudes needed to live effectively in the world.

We believe that there can be few objections to the definition, although the authors responded to it with different emphases and concerns. The papers were forged in the fire of the definition, but they highlight and give substantive emphsaes to its many different aspects. We see this effort not as a weakness but as a strength of the papers. It guarantees a multifaceted presentation of the issues, yet ties them together on the notion of increasing interdependence.

A basic assumption underlying this effort has been that the global system, although in part characterized by ethnic diversity and cultural pluralism, poses problems that go beyond the issues of multicultural education. Multicultural education is commonly defined as the curricular implementation of cultural pluralism. Global education addresses this issue, but goes beyond it to recognize that our global connections cannot be ignored. Our interdependence, for example, raises the issue of whether the industrial nations can stand by while the less developed nations are without the bare essentials of human life. Thus, there arises a moral concern on the part of the "have" nations as to whether they are willing to work toward a more equitable distribution of wealth and toward the liberation of the "have nots."

Among curriculum writers, teachers, and academicians, global education is an emerging concept, often coming under the rubric of area studies or international relations. Implementation of such a concept in curricular matters requires, we believe, a special type of strategy. Except on rare occasions, it is not reasonable or practical to expect an already overloaded curriculum to make room for special courses in global education. Moreover, the implementation of the goals of global education often requires a subject matter to be studied. That is, when issues in history or economics are explored, for example, it becomes clear that they are intertwined with a set of global issues. Likewise, the content of philosophy of education is bound to lead one into the issues of relativism, tolerance, equal opportunity, and the like. With little or no effort, global education is at home in the social sciences, the humanities, pure and applied sciences and, of course, the professional study of teacher education.

Our position then is quite clear. Since global education cuts across subject matter lines, it seems advisable to infuse it throughout the curriculum. With the infusion approach, key global concepts are used at every opportunity, to clarify and enrich subject matter. Differences between a conceptual approach to teaching and a topical approach are mainly based on perspective and emphasis. Indeed, when one considers the pervasive nature of global education, the two approaches develop quite naturally one from the other and are wholly compatible.

Whether global education will eventually be integrated fully into American teacher education remains to be seen. The history of change in the professional preparation of teachers over the past fifty years does not lead to great optimism. Yet, if those persons committed to educating for a global perspective can find ideas in these papers that stimulate rethinking about the role of teacher education in light of challenges created by our increasingly globalized existence, then our papers will have made a difference.

INTERNATIONAL DIMENSIONS IN TEACHER EDUCATION: ABSTRACTS OF CONCURRENT SESSION PRESENTATIONS

A World-Wide Imperative: International Dimensions in Teacher Education (Bullard, Betty M., University of South Carolina, Columbia, U.S.A.)

International education and its attendant programs are important to the strength of the country and other national defense interests. International education enables citizens to build their capacities for coping with diminishing resources and concommitant relationships. On the world-wide basis, technology and communications have put countries too closely together for them to remain unaware of issue that confront them all and of the knowledge needed to generate solutions. In the United States, we are still moving toward an international education and we are increasingly coming to the realization that international education should not be seen as an addition to the school curriculum, but as central to it. This paper reviews several studies indicating the need for international education and includes recomendations made by the United States National Advisory Board for International Education. A brief description is given of actions being taken at the University of South Carolina to address the challenge of incorporating international education into teacher education programs.

Issue Development for Global Perspectives (Park, J. Charles, University of Wisconsin - Whitewater, U.S.A.)

The world today has reached a critical point at which it becomes necessary to review previous assumptions about education and the manner in which we envision our roles for the continuation of peace. Educators are in a unique position to become especially sensitive to the need for developing avenues for peace; they share a mutual regard for the future of children and a faith in the ability of persons to reason with care and compassion. This paper explores ways in which issues might be used or created by educators for the advancement of global perspectives. The following points are made and elucidated upon to show their importance in education's attempt to incorporate global perspectives: (1) Programs to reduce world tension are a function of our ability to develop trust and friendship structures among peoples of the world; (2) Programs for the reduction of world tension may be enhanced by the creation of computer technology which is capable of translating languages of the world; (3) The development of international passports for teachers and scholars may assist in the creation of programs to reduce world tension. Suggestions are made for improvement of teacher education in the areas of teacher role in resolving world tension; interaction among teachers of various nations; cross-cultural courses and experiences; educational travel options; and development of programs for world peace.

Adjusting an American Teacher Education Program to Meet the Needs of Malaysian Students: A Case Study (Quisenberry, Nancy L., Southern Illinois University, Carbondale, U.S.A.)

For the past three years, the College of Education at Southern Illinois University at Carbondale has had an interesting and expanding experience with students from Malaysia. A case study of the University's work with their foreign students is shared to help other institutions plan for the integration of international students into their programs. Problems discussed in this paper include language proficiency, certification requirements, and understanding of the Malaysian agencies which send students to the University, transfer of credits, student records, and time allowed for completion of the program. Ways in which the University dealt with these problems are also described. Also touched upon are the benefits of working with these students, including faculty involvement, increased knowledge, and interaction among American and foreign students.

Preparing for International Understanding Through Teacher Education: The Preservice Teacher and Human Relations (Trimarco, Teresa A., St. John's University, Staten Island, New York, U.S.A.)

Teacher education should include an appreciation of the various cultures of the modern world in order to promote international understanding in a world that seems to grow smaller with each passing decade. Every teacher education course should cover human relations and international understanding in some form. There should also be one required course dealing specifically with this topic. The New York City Board of Education requires that all beginning teachers take such a course. Aspects of this kind of course are described, including instructor's role and characteristics; methods to facilitate interaction among students; student reports on family heritage; readings; field experiences; role playing; and topics such as women's rights, textbook bias, and prejudice.

SECTION VI

Innovations in Regional and International Cooperation

SOME ASPECTS OF INTERNATIONAL AND REGIONAL COOPERATION IN EDUCATION: PANELIST'S COMMENTS

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Introduction

I propose to discuss in this paper innovative frameworks for international cooperation in education which characterize two international bodies and one regional body, namely, the League of Nations' International Organization for Intellectual Cooperation, the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Southeast Asian Ministers of Education Organization (SEAMEO).

Historical Background

The roots of modern ideas of international and regional cooperation in education appear in ancient times, in the spread of Buddhism, Christianity, and Islam, in the translation of Greek literature, philosophy, and science into Latin and Arabic, in the spread of Chinese culture to Korea and Japan, and in Indian civilization to Southeast Asia. For many centuries, customs and ideas had been carried from one country to another by soldiers, traders, missionaries and explorers as agents of cultural interchange. Medieval European universities provided an institutional channel through which individual scholars sought knowledge and broadened their experience. The latter part of the nineteenth century saw the interchange of knowledge in various fields in the new form of non-governmental, international congresses.

Following World War I, a great many international scholarly organizations appeared, including the World Federation of Education Associations, which was established in 1923 and which was succeeded by the World Confederation of Organizations of the Teaching Profession after World War II. Insofar as these international bodies were not based on intergovernmental agreements, and their membership was mainly European and North American, they were private and regional in character.

Linked with but following this movement was a growing recognition by national governments of the need for international cultural and educational cooperation, which finally led to the formation of the League of Nations' International Organization for Intellectual Cooperation, whose activities provided important precedents for the work eventually assigned to UNESCO.

The International Organization for Intellectual Cooperation

This organization came into existence in an empirical manner: neither the need for it was anticipated by the States founding the League of Nations, nor later when the idea was eventually proposed, was it readily accepted. This was due to the absence of any organized international cooperation in educational activities between governments. It was also due to the antecedent circumstances bearing upon education: while during the Middle Ages education in Europe had been under the influence of the Church and was therefore transnational, the rise of modern state systems and the subsequent rise of nationalism had led national governments to establish exclusive control of education. Thus at the First Assembly of the League of Nations in December 1920, with the Covenant being silent about intellectual activities, proposals for League activities in education were opposed on the grounds that they were the exclusive province of each government or of private initiative and that League activities in this sphere would amount to interference with freedom of speech and religion. However, the First Assembly of the League agreed to ask the Council to give attention to an international organization for intellectual activities. Subsequently, the Council proposed the creation of an International Committee on Intellectual Cooperation, "to deal with questions of intellectual cooperation and education." When the matter came before the Second Assembly, it was thought wiser to confine the scope of the proposed Committee to intellectual questions outside the range of teaching proper, and the reference to education was therefore dropped. But, as it turned out, the Committee, which was finally established in 1922, was soon working actively on educational questions.

This Committee, functioning as a consultative body to the League of Nations, was made up originally of a carefully selected group of the best thinkers of the age drawn from different intellectual disciplines, including Henri Berson as Chairman, Albert Einstein, Marie Curie, Hendrik Lorentz, and Gilbert Murray. It is worthwhile recalling that in the first ten years of its existence the Committee faced a number of difficulties, the most serious being insufficient funds. Since its work was both unfamiliar and undefined and there was the lack of understanding and support on the part of national delegations in the Assembly, the funds assigned to it were so inadequate that the Committee decided to issue an appeal for aid from external sources. France, where public opinion has always been specially alive to intellectual problems, offered the Committee a permanent executive organ in the form of an institute to be established under French law with premises in Paris and an adequate annual income. With the offer accepted by the League, the Institute of Intellectual Cooperation was opened in Paris in 1925.

With the Institute serving as its Secretariat, the Committee became the governing body of the Institute, and National Committees on Intellectual Cooperation were organized in some forty countries to form a network of relations with government agencies and private groups. In 1926, the League Assembly recognized the existence of the International Organization for Intellectual Cooperation, consisting of the Committee, the Institute, and the National Committees on Intellectual Cooperation. Among it myriad functions, the Organization worked on the structure of higher education throughout the world, secondary education, problems of textbook revision, a declaration on teaching history, a convention on broadcasting in the interest of peace, a convention on free circulation of educational films, and problems relating to the use of radio and films in schools. By request, it sent an educational mission to China to advise on reorganization of the Chinese school system, conducted an international inquiry for the International Labour Office into popular libraries and the arts in relation to the leisure time of workers, and promoted instruction in schools about aims of the League of Nations and methods of international cooperation.

The International Organization for Intellectual Cooperation of the League of Nations represented an adventure into an entirely new region of international cooperation, and it merits examination. A number of significant points stand out in the brief history of this organization.

Firstly, at the inception of the League of Nations when the Covenant came into operation, the scope of the League's activities covered not only political matters relating to the maintenance of peace and the prevention of war, but also international cooperation in technical matters. For the latter purpose, a number of auxiliary organs of the Council, known as Technical Organizations, were established. They were modelled on the structure of the League: a standing committee, corresponding to the Council, a general conference of government representatives, corresponding to the Assembly, and a Secretariat, to deal with economic and financial matters, communications, transit, and health. But international cooperation in scientific, education, and cultural matters was completely disregarded.

Secondly, prior to the establishment of the Organization, there had been no forerunner to provide lessons for structuring and organizing international cooperation and collaboration in education. The founders of the League of Nations not only had no idea of the need for it, but also considered education as a matter not appropriate for cooperation across national frontiers.

Thirdly, the League of Nations having set up the International Committee on Intellectual Cooperation was an act of innovation, with the initial object to summon a select group of the world's foremost leaders in the sciences and humanities for the League's counsel. After a few years of gestation, it grew and developed through the establishment of the Paris Institute and the National Committees, reaching in 1926 the status of a Technical Organization, similar to others of the League. From then on until the outbreak of World War II, it performed the unanticipated function of a mechanism for international cooperation in education.

Fourthly, from the start its focus on operations was largely on the interest and potentialities of the elite, its programme being made up largely of specialized projects, often unrelated to government policies, of little concern to government officials, and little understood by the ordinary citizen. This was deliberate and in keeping with its approach as recorded in the Minutes of the Committee in 1926:

1. to serve science and art, the savants and the artists;
2. by thus placing itself at the service of the intellectual elite of the world . . . the Committee would have helped another cause -- that of peace and mutual understanding between peoples.

However, over the years, its programme did move toward broader activities. As a result of World War II, the League of Nations and, together with it, the International Organization for Intellectual Cooperation went out of existence. UNESCO took over the assets of the Paris Institute of Intellectual Cooperation.

United Nations Educational, Scientific, and Cultural Organization

With World War II still going on, the idea of creating an international organization to be concerned with education, science, and culture was conceived in London by the Conference of Allied Ministers of Education (CAME). The place of UNESCO in the United Nations system was outlined at the San Francisco Conference, meeting from April to June 1945, to draft the UN charter. The UNESCO Constitution was drafted and signed in November 1945 by the delegates to the London Conference for the Establishment of the United Nations Educational, Scientific, and Cultural Organization.

Distinctive Features of UNESCO

Objectives. UNESCO's purpose has been debated since its early days, with the attention focusing on certain phrases in the Constitution which lend themselves to different interpretations as to what UNESCO should do. The Preamble to the Constitution states the purpose of UNESCO in broad terms as "advancing, through the educational, scientific and cultural relations of the peoples of the world, the objectives of international peace and of the common welfare of mankind for which the United Nations Organization was established and which its Charter proclaims." Thus by virtue of the Preamble, UNESCO has two major objectives: to promote peace and security as well as to serve the common welfare of mankind. But the text of Article I states a single purpose, that of contributing to peace and security, listing other ought-to-be purposes as means of attaining peace and security. The title for Article I itself, "Purposes and Functions," also suggests multiple purposes.

The lack of clarity and agreement concerning the mission of UNESCO led to the adoption of two different approaches. The first argues that UNESCO is an integral part of the world political system and has the responsibility to contribute directly to peace and security by coordinating UNESCO's activities with those of the United Nations. The second argues that UNESCO should adopt a long-range, indirect approach to peace and security through promotion of international understanding and by furthering the welfare of mankind through education, science, and culture as well as advancement of knowledge, thus laying foundations for future peace.

This difference in views recurred in successive conferences and, with the intensification of the cold war, mounting tension was reflected in demands that UNESCO focus not only on building the foundations of long-term peace but on helping to preserve the then precarious peace. However, over the years, Member States have shown a marked preference for the second approach which justifies a wider range of activities for development of international understanding, promotion of human welfare, and advancement of knowledge, while the major goal of UNESCO to contribute to peace and security has not been completely ignored.

Scope of activities and method. UNESCO was entrusted to undertake much more difficult, exacting assignments, involving many more areas and fewer tangible activities, than other UN specialized agencies. The wide range of its activities include: education, for adults as well as children; advancement of knowledge in the natural and social sciences; activities in humanities, arts, and libraries; historical monuments; information and communication media, including press, radio, television, and film; and activities relating to various aspects of intellectual activity, including exchange of persons, publications, and objects of artistic and scientific interest.

It should be noted that among the founding Member States, the United States was primarily responsible for having UNESCO charged with the entirely new task of promoting people to people understanding through mass media, which was believed to be the channel through which UNESCO could become a positive influence for peace.

In performing its tasks, UNESCO was not expected to have the initiative and authority inherent in national governments. Also, UNESCO was not to intervene in Member States on matters which are essentially within their domestic jurisdiction. But UNESCO was to be linked to scholars and experts as well as to peoples through its National Commissions and through International Non-Governmental Organizations (NGO's) in consultative arrangements with UNESCO.

Nature and structural framework. With the lessons provided by the International Committee on Intellectual Cooperation of the League of Nations, cooperation of governments was viewed as essential to ensure financial support and authority of the organization. Yet the involvement of individuals in providing guidance to governments was also considered desirable. Thus the Constitution adopted in London makes UNESCO primarily an intergovernmental organization, with the limitation later removed that the Executive Board should be composed of individuals representing the General Conference as a whole rather than individual governments.

The Constitution as it now stands provides for the General Conference consisting of not more than five representatives from each Member State; the Executive Board consisting of 51 members elected by the General Conference from among delegates appointed by, and representing, Member States; the Secretariat headed by a Director-General; and National Commissions, patterned after the defunct National Committees of the International Organization for Intellectual Cooperation of the League of Nations.

INTERNATIONAL COOPERATION

A subsystem in the UN system. The UN Charter provided a framework into which various international specialized agencies established by intergovernmental agreement could fit, and the UNESCO Constitution stipulated correspondingly for that relationship to be established under Articles 57 and 63 of the Charter.

From the start, the governments that created UNESCO recognized that the UN system was the essential framework to achieve international understanding and world peace, and UNESCO, together with other UN specialized agencies, was intended to cooperate closely with and give support to the United Nations. Towards this end, the Charter provides that, "the Organization shall make recommendations for the coordination of the policies and activities of the specialized agencies."

From the early years, the United States maintained that UNESCO's specific assignment in the general UN structure is to contribute its part to a world system strong enough to keep the peace, but there was no agreement among Member States.

Except for political matters, many of UNESCO's programme activities in technical fields were integrated into those of the UN system and there has been no problem of cooperation between UNESCO and other specialized agencies.

UNESCO's Significance and Prospects

Considering UNESCO as a mechanism for international cooperation in education, science, and culture, its organizational structure and character represent a stage of development beyond where its forerunner stood. It is truly an intergovernmental organization and, as such, enjoys all the inherent advantages of which the League of Nations' International Organization for Intellectual Cooperation was deprived, such as a measure of funding support through its budgetary system; cooperation and necessary assistance from Member States, UN agencies, and other organizations; the authority and credentials of an intergovernmental body providing attendant conditions conducive to the more effective pursuit of its activities.

While its forerunner focussed attention on the elite as the channel to reach wider audiences, UNESCO chose the new method of working with and through Member Governments, agencies, and special groups including mass media to reach mass audiences. In addition to establishing a variety of new aspects, the founders of UNESCO wisely adopted the ideas of National Commissions patterned after the National Committees of the International Organization for Intellectural Cooperation -- an arrangement formally linking citizen groups to the work of the international organization, which is a unique feature that no other UN agency has. As an added feature of UNESCO, a permanent consultative body of eminent world leaders in the sciences and humanities, similar to the League's Committee on Intellectual Cooperation, could and should have been set up. Apart from the benefits to be gained from cooperation of the world's top intellects, the mere existence of such a body for UNESCO could conceivably have a considerable moral influence on world opinion for international understanding.

When UNESCO was founded in 1945, there was a high degree of enthusiasm for what it stood for and could be. But, almost immediately, the cold war began, and no government gave the kind of support commensurate with the initial enthusiam. UNESCO, like the United Nations, was set up on the euphoria of one world, in which the great powers would seek and give trustworthy cooperation. Thus, in the real world of the cold war struggle, UNESCO found itself burdened with a gigantic task far beyond its power to cope, insofar as its stated purpose was to contribute to peace and security by promoting collaboration among nations through education, science, and culture.

The sharpest test of whether UNESCO could act politically in support of the UN came in 1950 when North Korean forces invaded Sourth Korea, with the UN Security Council condemning the breach of peace and calling on UN Member States to furnish assistance to repel the attack. UNESCO was called upon for assistance to the UN by explaining to the world the issue in Korea and upholding the UN as the defender of peace. After a long debate, the UNESCO Executive Board condemned the aggression against South Korea, but in the world press, this action was interpreted as a step away from neutrality on issues between East and West. Mass media were not effectively utilized and even periodical publications put out by the UNESCO Secretariat gave little attention to the Korean situation. Thus experience revealed that not many Member States were prepared to encourage UNESCO to pursue a direct political role unrelated to education, science, and culture, and that the effort to use UNESCO's resources to support the UN in an emergency was largely abortive.

The most serious, unequivocal, and multiple charges came recently with the notification of withdrawal of the United States from UNESCO. It was affirmed that there had been trends in policy, ideological emphasis, budget and management of UNESCO which were detracting from the Organization's effectiveness and which had led it away from the original principles of its Constitution. It was pointed out that these trends had served the political purposes of Member States and not the cause of international cooperation. The United States, on its part, had tried without success, "to encourage the Organization to reverse these trends; to redirect itself to its founding purposes; to vigorously avoid becoming a servant of one or another national policy; and to manage itself in a way that rewarded efficiency, promoted fearless programme evaluation, and followed priorities based on programme value rather than on past habit, political expediency, or some other extraneous consideration." The instance reported as of special concern to the United States was UNESCO's role in the establishment of a "new world information and communication order" which would imply increased government control over media contents and jeopardize the freedom of the press and liberty of expression.

Viewed in a larger sense, UNESCO was bound to incur criticism and blame for involving itself in political objectives of Member States. This is unavoidable, because the Organization had been charged with the responsibility of dealing with not only education, science, and culture, but also with other matters of a political nature, which are subject to the influence of dominant groups of Member States. For a period after the Organization was founded, the Soviet Union ignored UNESCO, and then its attitude changed to open hostility, heaping scorn and abuse on UNESCO and describing it as an instrument of United States policy. In 1950 the United States sought to involve UNESCO in the Korean War. In 1956 it was the Soviet Union and its allies that sought UNESCO's support in condemning British, French, and Israeli action in Egypt. Then the Western allies wanted UNESCO's condemnation of Soviet action in Hungary. With the Soviet Union joining UNESCO in 1954, and the number of UNESCO Member States increasing from 28 to 161 today, politication of non-technical matters was bound to be more evident.

It is true that UNESCO has not lived up to the expectation of those who pressed for its creation in 1945; neither have the Member States of UNESCO done so -- Member States being responsible for determining its policies and directions, whether in tune or out of tune with its international vocation. As the world focus of men's aspirations in the vast areas of education, science, and culture, UNESCO must always fall short of the hopes placed in it.

Past experience indicates that UNESCO has served the purpose of conserving and increasing educational, scientific, and cultural activities, which assist Member States to define their own most pressing problems and to take remedial action. The Fundamental Education Project has helped to focus world attention on ignorance and illiteracy and has underlined the indispensable role of education in economic and social develpment. UNESCO's project on problems of living in arid zones has helped to clarify the issues, to stimulate interest, to encourage cooperative research, and to point the way toward solutions for comparable problems in humid tropical zones. Through UNESCO's concern with the preservation of cultural heritage, the ancient monuments in Egypt have been saved and Borobodur has been restored. UNESCO has also served as a sort of laboratory for experiments in social engineering in many fields, notably the various methods employed in the revision of textbooks.

In the longer perspective of history, UNESCO's significance may well transcend its accomplishments or failures by virtue of its existence as a new kind of international effort to promote education, science, and culture; its role as a catalyst for assimilation of new states and former colonial areas into the fabric of a modern world community; and its world-wide concern for and emphasis upon man as individual.

UNESCO's Prospects

UNESCO's success and prospects for the future depend upon its ability to stimulate action by governments, National Commissions, private organizations, special groups, and individuals. There is little that UNESCO's own Secretariat could do beyond providing stimulus and assistance to programme developments in individual countries and, thus, the answer for UNESCO does not lie in building itself into a large international bureaucracy with extensive operational responsibilities.

An important role of active, vigorous, and vigilant UNESCO National Commissions, made up of specialists and experts, is essential for stimulating widespread support of national activities to carry out UNESCO's aims, and for advice on national policies toward UNESCO.

The basic weakness of UNESCO lies in the policy and action of Member States. UNESCO can operate efficiently only with more positive support and active cooperation of Member states, for the area of UNESCO's competence ends at their boundaries. They have to take adequate action to achieve the objectives to which they subscribe in the Constitution of the Organization and to make possible to the fullest extent the implementation of its approved programmes of activities.

Member States must also decide whether, in the present and future context of world political reality and ideological struggle, more positive results in easing tensions can be better achieved by concentrating UNESCO's activities on educational, scientific, and cultural cooperation with the limited technical purposes rather than by involving the Organization in other matters of a controversial, political nature. If the Organization is properly used as a means by which peoples, through their governments, can agree upon common goals important to all and appropriate measures to be taken through joint effort, UNESCO is capable of almost unlimited achievement.

Southeast Asian Ministers of Education Organization

SEAMEO was founded in November 1965 for the purpose of the Southeast Asian Ministers of Education in Bangkok for the purpose promoting regional cooperation in education, science, and culture at the first meeting of the Southeast Asian Ministers of Education in Bangkok. The Organization undertakes joint projects and programmes of mutual benefit in specific areas to assist Member States in the development of educational activities through its regional institutions (and a number of affiliated national bodies) located in the Member States.

SEAMEO provides a model of what can be achieved through regional collective endeavors to meet the needs of Member States for human resource development. The main features of SEAMEO, including its approach, methods, structural and institutional arrangement, and funding scheme are described below.

Purpose and function. Although reference is made in the intergovernmental charter to ideals of furthering respect for justice, the rule of law, and human rights and fundamental freedoms, the purpose of the Organization is limited to cooperation in education, science, and culture. To realize that purpose, the Organization is enjoined to collaborate in the work of advancing mutual knowledge and regional and international understanding; to promote and collaborate with Member States in joint educational projects and programmes of mutual benefit; to maintain and diffuse knowledge; and to assist in articulating education to the economic and social goals of individual Member States.

Thus, both the purpose and function of SEAMEO are limited in scope and confined to technical matters of educational, scientific, and cultural activities.

Structural and Institutional Arrangement. The Organization comprises the Council, the Secretariat, and Regional Centres and Regional Projects.

The Council. The SEAMEO Council (SEAMEC) consists of the Ministers of Education of the Member States. The Council, meeting annually in ordinary session, makes policies, appoints the Director of the Secretariat, receives the reports of the Director, and approves the programme and budget of the Organization.

The Secretariat. The Secretariat (SEAMES), which is the executive arm of SEAMEO, is headed by a Director who is the chief administrative office and legal representative of the Organization. The Director recruits and appoints professional staff from the Member Countries and general staff from the host country, Thailand. In normal practice, the post of Director rotates every three years in sequence among Member States.

Regional Centres and Regional Projects. Regional Centres and Projects are set up on a permanent basis to carry out joint programmes and activities in specific areas.

Regional Governing Boards. Each of the Reional Centres and Regional Projects has a Governing Board, comprising members nominated by the Minister of Education of each Member State and appointed by the Council. The Board determines policies for the operation of the Centre or Project, approves the annual programme and budgets, controls the accounts, makes rules and regulations, and performs other duties as may be necessary.

Structural scheme. A Regional Centre refers to a training and research institution which, located in a particular Member State, is responsible for undertaking assigned programmes of activities for all Member States. A Regional Project refers to an arrangement whereby joint programme activities are undertaken by a number of affiliated national bodies of Member States on behalf of the Organization and Member States participating in the Regional Project. The Regional Project is, in fact, a network of national centres or sub-centres carrying out Project activities which are coordinated through a Regional Coordinating Unit.

A Regional Centre is headed by a Director, while a Regional Project has a Coordinator heading the Regional Coordinating Unit. The Centre Director or Project Coordinator is nominated by the Governing Board concerned, approved by the

Minister of Education of the host country, and formally appointed by the Council.

At present there are five Regional Centres and two Regional Projects. The Centres are: the Regional Centre for Tropical Biology (BIOTROP), located in Bogor, Indonesia; the Regional Centre for Educational Innovation and Technology (INNOTECH), located in Manila, Philippines; the Regional Centre for Education in Science and Mathematics (RECSAM), located in Penang, Malaysia; the Regional Language Center (RELC), located in Singapore; and the Regional Centre for Graduate Study and Research in Agriculture (SEARCA), located in Los Banos, Philippines. The Regional Projects are: the Project in Archaeology and Fine Arts (SPAFA); and the Tropical Medicine and Public Health Project (TROPMED). The SPAFA Coordinating Unit is in Bangkok, with sub-centres in Bangkok, Jakarta, Manila and Quezon City. The TROPMED Coordinating Unit (TROPMED Central Office) is also in Bangkok, and the four national centres are in Bangkok, Jakarta, Kuala Lumpur and Manila.

SEAMEO membership. Another distinctive feature of SEAMEO is its membership scheme. The Charter provides for three categories of membership: Member States, Associate Members, and Affiliate Members. At present, there are eight Member States: Brunei, Democratic Kampuchea, Indonesia, Laos, Malaysia, Philippines, Singapore, and Thailand. France became the first Associate Member in 1973, followed by Australia and New Zealand the following year.

The Charter of SEAMEO was amended in 1983 to provide for admission as Affiliate Members semi-governmental institutions or non-governmental organizations which are willing to promote cooperation among Southeast Asian Nations through education, science, and culture. The Association of Canadian Community Colleges (ACCC) applied and was admitted as the first Affiliate Member early this year (1984).

Associate and Affiliate Members are entitled to participate in the programmes of the various Regional Centres and Regional Projects and to attend without vote all meetings, including Governing Board Meetings and the annual Conference of SEAMEC. The privilege of attending in-camera sessions is not extended to Affiliate Members.

Formulation of the programmes of activities. Each Regional Centre or Project is guided by a Five-Year Development Plan as approved by the Council. The programmes of activities which make up the Development Plan of each Regional Centre or Project are formulated through a unique process of careful preparation and collaboration, starting with each individual Member State assessing its own needs. Each State maintains National Coordinating Committees made up of specialists and representatives of government agencies for dealing with matters pertaining to SEAMEO Regional Centres or Projects, one committee for each. One of the main functions of this committee is to assess national needs and to identify programme areas to be proposed in the formulation of the Five-Year Development Plan. This exercise is done either by such a committee alone or by a specially convened National Consultative Meeting with the committee serving as the core.

At the regional level, for the formulation of programmes to be included in the Development Plan, each Centre or Project organizes a special meeting of representatives and specialists from all Member States, most of whom have earlier been involved in the initial needs assessment exercise at the national level. The recommendations from this regional meeting consititute the basis for forming the draft Development Plan for the Regional Centre or Project. After the draft is submitted to the Governing Board for endorsement, it is then submitted to the annual High Officials Meeting convened by the SEAMES Director in Bangkok for further examination before final submission to the annual SEAMEC Conference for adoption.

This process ensures that SEAMEO activities do not duplicate those of the Member States, that SEAMEO activities are relevant and necessary to meet the common needs of Member States, and that the costs involved are justified.

Funding Scheme

The annual budget requirements of SEAMEO Headquarters in Bangkok are fully met by Member States. Each Member's share is determined in accordance with the Contribution Index adopted by the Council. The Member State hosting a particular Regional Centre contributes funds toward the capital and operating costs of that Centre *in toto*. Member States participating in a particular Regional Project share the operating costs of the Coordinating Unit for that Project on a *pro rata* basis. The Member State hosting a National Centre or Sub-Centre contributes funds toward its operating costs *in toto*.

Special Funds are those required for financing SEAMEO scholarships and the costs of participation in regular programmes and activities, including Governing Board meetings, seminars, workshops, conferences, and personnel exchanges, organized by Regional Centres and Projects for the personnel of Member States. The Special Funds requirements of all Centres and Projects are met by an allocation from the SEAMEO Educational Development Fund (SEDF) to which Members, Associate Members, donor governments, and agencies contribute. The responsibility for fund raising rests with the SEAMES Director.

Special activities outside of the regular programmes undertaken by Regional Centres and Projects are financed by funds raised by Centre Directors and Project Coordinators with the assistance of the SEAMES Director.

SEAMEO's Prospects

Over the years, SEAMEO has grown and matured with a rich and fruitful experience in sharing resources to achieve larger benefits. SEAMEO has found a working formula for success: its method of regional approach in conceptualization, regional participation in programme preparation, and regional cooperation in implementation.

The greatest strength of SEAMEO lies in the spirit of cohesiveness and the strong sense of regional identity among Member States, unaffected by regional diversity in religious belief, cultural and racial background, immediate past experience, and recurring domestic issues of national concern. SEAMEO Member Governments, through their Ministers of Education as Council members, have responded without fail to every challenge to preserve and enhance the effectiveness of the Organization.

Of importance is the fact that while the idea of self-reliance and sharing of available resources has been the continuing basis of planning and organization, enthusiastic appreciation of what SEAMEO is, what it does, and what it can do for the region's peoples has earned the support of many friendly governments and other donors the world over. Funding support in various forms and technical assistance from SEAMEO donors have contributed significantly to the success of the Organization.

Having progressed thus far, and with confidence in its viability over the years to come, SEAMEO must look at the future with caution and deep thought. Because there is a limit to growth at some point in terms of financial implications, the temptation of continually taking on new appealing programmes without relinquishing those less relevant is a way of reaching that limit too soon. Organizational growth has its attendant adverse implications, which are often ignored. Problems of growth need to be tackled with a flexible frame of mind, with objectivity, and with a determination to develop the potential that SEAMEO has so that it will be able to play an even greater and more significant role.

There remain two other dimensions that I wish to bring up: first, SEAMEO as a means of building the foundations for establishing mutual understanding and better relations between ASEAN countries and Vietnam; and, second, ASEAN-SEAMEO linkages.

Although South Vietnam, as a sovereign State before its extinction through conquest and the subsequent formal North-South unification into the present Socialist Republic of Vietnam in July 1976, had been a Member of SEAMEO. The present Vietnam is not. Both Democratic Kampuchea and Laos are Members. Since 1980 Kampuchea has participated in High Officials Meetings and the annual conferences of the Council, but Laos has remained an inactive Member since 1976. The Organization, on its part, continues to communicate with both Kampuchea and Laos as Member States. This is quite proper, because SEAMEO is non-political and, in spite of the fact that all active Member States of SEAMEO are ASEAN States, has remained non-political.

Once the current deadlock over the Kampuchean issue has been overcome, or when and if the issue dissipates with time, it will be in the interest of both sides to promote mutual understanding and neighborly relations. There and then, with its recognized articulation on the universally appealing theme of development of human resources, SEAMEO can play a vital role, during the initial period of contact, in bringing about understanding and mutual trust through Vietnam's participation in SEAMEO programmes. Vietnam is greatly in need of relevant training in various fields for national reconstruction and development. With SEAMEO's rich experience and well-developed infrastructure, which includes fairly extensive physical resources, SEAMEO is in a position to offer what Vietnam will find more relevant to its needs than it can obtain from its allies. Through its participation in SEAMEO, trust and understanding can be inculcated, and hopefully a good feeling of having useful neighbors, a sense of belonging to the same region, can be developed in spite of the differences in political systems. In this way, foundations will have been built for establishing firm and better relations in the interest of peace and security in the region.

While SEAMEO has been cooperating and collaborating with UNESCO on the basis of a formal agreement concluded in June 1975, it has not yet had any cooperative arrangement with ASEAN. It is desirable for SEAMEO and ASEAN to establish such an arrangement. This is to avoid duplication of effort as well as to ensure the effectiveness of human resource development programmes.

At present, there is very little, if any, danger of actual duplication of work between SEAMEO and ASEAN, mainly because SEAMEO's approach and method of operation is different from ASEAN's. Neverthelless, conceptually and in good comon sense, the fact that SEAMEO's areas of interest and responsibility are co-existent, as well as its jurisdiction coterminous with those of ASEAN, suggests the desirability of a rational course of action. Thus, SEAMEO has recently initiated several measures toward that end, the latest being the Resolutions passed by the Council at the Nineteenth Annual Conference early this year:

1. directing the Director of SEAMES to take further steps towards strengthening cooperation and working relations with ASEAN in areas of common interest; and

2. urging respective Ministers of Education to initiate discussions with the respective Governments on the need for SEAMEO to implement, on behalf of ASEAN certain activities which fall within the competence of SEAMEO, the outcome of the discussions to be reported at the next SEAMEC Conference.

Another standpoint that could be conceived is to start with the postulate that it is desirable to strengthen ASEAN by all means in the interest of regional peace and security, and that the integration of SEAMEO into ASEAN is a major step in that direction. Such an idea is a delusion, and a disservice in itself to ASEAN, at least, for the reasons mentioned earlier in connection with the possible role of SEAMEO in reference to Vietnam. Legally and in actual fact, SEAMEO and ASEAN are not identical, and each is well defined. In the constitutional context of SEAMEO, there is no way of integrating SEAMEO into ASEAN. However, in practice, ASEAN countries, through their Ministers of Education acting in the SEAMEO Council, can render SEAMEO ineffectual in many ways, including their concerted withdrawal from the Organization. All this is purely academic. To entertain the idea that ASEAN leaders may decide to merge SEAMEO into ASEAN or to render SEAMEO ineffectual is to raise doubt about their statesmanship and wisdom. With or without linkage, SEAMEO and ASEAN will continue as two separate entities.

The establishment of cooperation and working relationships between SEAMEO and ASEAN can be effected through formal agreement or can be arranged informally. In this connection, it is important to note that the SEAMEO Charter stipulates in no uncertain terms that any cooperative arrangement to be made for SEAMEO be limited to working relationships only. This means that any cooperative arrangement jeopardizing the autonomy of the Organization cannot be made.

My view of SEAMEO's future prospects is optomistic, tempered by caution and some concern.

THE ASEAN DEVELOPMENT EDUCATION PROJECT: AN INNOVATION IN INTERNATIONAL COOPERATION FROM THE ASEAN PERSPECTIVE

PANELIST'S COMMENTS

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Background

The Association of Southeast Asian Nations (ASEAN) was organized about seventeen years ago to insure peace in the region through economic, social and cultural cooperation. The member countries are Indonesia, Malaysia, Philippines, Singapore, Thailand, and recently, Brunei. The idea of cooperation in education among the member countries came up for the first time in ASEAN formal discussion when the ASEAN Permanent Committee on Socio-Cultural Activities organized a Sub-Committee on Education in pursuance of the decision of the Thirty-Second Session of the ASEAN Secretaries-General, held on July 11-12 1974, to negotiate an ASEAN- Australian project that would include a project on education which the Philippines was assigned to formulate.

The ASEAN Sub-Committee on Education held its first meeting in Manila, October 21-23 1975, to consider various proposals for ASEAN-Australian cooperation in the field of education. Included on the agenda of this meeting was the University of the Philippines College of Education proposal for the establishment of a Center for Development Education in the ASEAN. This Philippine paper, which was sent to the other ASEAN countries for their reaction prior to the meeting, and the position papers of Indonesia and Malaysia on this proposal, were part of the working papers of the meeting. During the meeting, the problems of education in the ASEAN were discussed and a consensus was reached that there was a need for the member countries of ASEAN to collaborate in their search for solutions to common problems in education. One of these is their common concern to strengthen the role of education in their national development efforts.

The Sub-Committee decided that in order to meet the problems of establishing meaningful relationships between education and national/regional development there should be closer collaboration in the field of education among the ASEAN member countries. The meeting, therefore, recommended the establishment of an ASEAN Network of Development Education Centers. In making this recommendation, it was agreed that there should be, as much as possible, no duplication of activities of existing national and/or regional educational agencies. The proposed ASEAN Network of Development Education Centers would complement the efforts of these agencies and help develop a set of consolidated regional activities. Moreover, the network would serve not only national but also regional educational needs.

In recommending the establishment of the Network of Development Education Centers, the Sub-Committee took into account the following factors.

1. The ASEAN member countries are seriously concerned with the problems of establishing meaningful relationships between educational and national/regional development, underscoring the need for baseline studies in this area.
2. ASEAN member countries face common educational problems which suggest the need for cooperative and collaborative efforts and cross-national studies.
3. For the purpose of undertaking cross-national studies in education in the region, it is necessary to pool resources in terms of research competencies and research facilities. In this connection, the specialized skills and experience in the field of education available in each member country can be utilized for specific activities relevant to the needs of the member countries in a more balanced and logical manner.
4. It is recognized that the problems of education in the ASEAN member countries, as they are in any country, are closely linked with their social, economic, political and cultural realities, making it imperative that a multi-disciplinary approach be adopted in understanding and finding solutions to these problems.

The aims of the proposed Network of Development Education Centers were thus defined as follows.

1. Enhance and strengthen the contribution of the various national development education centers in the ASEAN member countries to education in national/regional development.
2. Develop a mechanism for consolidating efforts in education in the region.
3. Serve as a resource generator and a dissemination mechanism for significant educational research and development activities.
4. Provide a mechanism for the sharing of technical services in education in the region.
5. Serve as a vehicle for collaborative efforts for the improvement of education in the Asian region, in general, and in the ASEAN countries, in particular.

Identification of Initial ADEP Sub-Projects: The Role of the ASEAN Education Task Force

To expedite the setting up of the proposed network, the first meeting of the Sub-Committee on Education recommended several measures, one of which is the organization of an ASEAN Education Task Force composed of not more than two nationals from each of the ASEAN member countries, and who are knowledgeable and recognized experts in the field of education. The Task Force was assigned to undertake baseline studies on the existing facilities and specialized activities in the field of education among ASEAN member countries, and study and recommend how these facilities could be fully utilized. Sprcifically, the Task Force was expected to:

1. identify specific priority projects under each major area of activity, (e.g., research and development, dissemination of scientific publications, exchange of educational personnel, inservice education and regional seminars/workshops, inter-cultural education, and educational technology); and
2. study and recommend institutional relationships/arrangements within the country and within the network system.

Recalling that the Philippines had earlier been assigned to formulate the proposal in the field of education, and noting the decisions made by the ASEAN Secretaries-General in their Twenty-Fourth Session held in Manila on April 4 1974, designating the Chairman of the Standing Committee as the contact point for these projects, the Sub-Committee further recommended that the ASEAN National Secretariat of the Philippines be designated to coordinate the activities related to the establishment of the Task Force, until such time as an appropriate coordinating body could be formed.

The Sub-Committee agreed that as soon as the members of the Task Force could be designated by their respective Governments, the Task Force should meet to design a plan of work which could be used in gathering the needed data and information. Accordingly, the Task Force was organized and met in February 1976, with two members from each ASEAN member country. Dr. Paz G. Ramos of the Philippines, and Mr. John S. K. Yip of Singapore were elected Chairman and Vice-Chairman, respectively. The following criteria were drawn up for the educational projects to be developed:

1. projects should not duplicate the activities of UNESCO, SEAMEO, RIHED, or other such agencies as far as possible;
2. activities should be related to development education;
3. the scope of activities should be clearly specified; and
4. activities should be relevant to country or regional needs.

With these guidelines as a framework, the Task Force undertook baseline studies with the following objectives in view.

1. Identification of existing resources in each individual member country which might interest other members and which could be shared among members.

2. Description of projects proposed to be undertaken through the network.

3. Description of proposed institutional relationships among participants in the network.

The Task Force developed a survey questionnaire designed to identify national development goals and their corresponding demands on education, priority projects in education, and existing educational resources. A working paper on institutional relationships within the network with accompanying questions was also made a part of the survey questionnaire. The questionnaire was fielded in each ASEAN member country by their respective members of the Task Force.

In addition, the Task Force visited each country to meet with officials to discuss and confirm questionnaire returns. The results of the survey and interviews provided the basis for identifying the initial educational projects for ASEAN collaborative ventures.

The Task Force conducted its baseline studies from February to June 1977. The results of these studies served as the basis for formulating and designing the ADEP.

Legitimating the ADEP

The report of the ASEAN Education Task Force together with the proposed ADEP with the full description of the five initial sub-projects was considered and approved at the meeting of the ASEAN Sub-Committee on Education held in Bangkok on June 27-28 1977. The five sub-projects are: Educational Management Information Systems, Special Education, Teacher Education Reform, Test Development, and Work-Oriented Education for In-School and Out-of-School Youth.

On December 6-7, 1977, a preparatory meeting of Senior Officials from the ASEAN Ministries of Education was held in Manila to consider for implementation the recommendation contained in the Report of the Second ASEAN Sub-Committee on Education which was endorsed to the ASEAN Ministers of Education for action.

The ASEAN Ministers of Education met in Manila on December 8-9 1977. The meeting approved the establishment of the ASEAN Network of Development Education Centers and of the ASEAN Development Education Project (ADEP) with five components as proposed by the ASEAN Education Task Force.

The ASEAN Ministers of Education also approved the establishment of a

Regional Coordinating Committee which was to be responsible for the implementation of the ADEP. It was to be composed of National Development Education Center (NADEC) heads and representatives of each member country as deemed necessary. The composition and organization of the NADEC was left to each member country taking into consideration its particular governmental structure.

The Ministers also mandated that the Regional Coordinating Committee for the ADEP be convened for the purpose of firming up each of the five initial sub-projects in terms of specific activities and costing. Each of these projects was to be regional in scope and was not to be based in a particular country.

The Regional Coordinating Committee, at its first meeting held in Jakarta, July 17-18 1978, considered and approved the fully detailed description of each of the five initial projects and its corresponding costing. Dr. Paz G. Ramos and Dr. Wichit Srisa-an have served as Chairman and Co-Chairman respectively of the Regional Coordinating Committee (RCC) from the first meeting to date.

Funding for ADEP

The meeting also agreed that Malaysia, being the coordinator of the ASEAN-Australian dialogue, be requested to submit the ASEAN Development Education Project to the Australian Government for funding. Moreover, the RCC also agreed that all ASEAN member countries should now designate their respective National Development Education Center.

A meeting of ASEAN-Australian education experts was convened in Manila, September 13-14 1979, to discuss in greater detail the ASEAN Development Education Project under the ASEAN-Australia Forum. This meeting was attended by two delegates from each ASEAN member country and three Australian delegates. There was also a representative of the ASEAN Secretariat.

The ASEAN delegation clarified and emphasized the following aspects of ADEP.

1. The ADEP was one project with five initial sub-projects which are regional as well as national in scope.
2. The primary aim of the ADEP was to strengthen national capabilities through the sharing of expertise and resources by using existing facilities in the ASEAN region.
3. The budgetary requirements of the project was A$2.6 million.
4. In the case of the Philippines, the ASEAN Secretariat, Minister of Foreign Affairs, Philippines, and NADEC-Philippines would handle finances and coordinate all technical activities of ADEP, respectively.

Memoranda of Understanding relating to the ADEP were signed by each of the governments of the five ASEAN member countries and the Government of Australia in the amount of A$2.6 million.

Mechanism for Implementing the ADEP

The National Development Education Centers in the ASEAN member countries are as follows:

NADEC-Indonesia
Cultural Research and Development (BP3K)
Departemen Pendidikan Dan Kebudayaan
Jalan Jenderal Sudirman - Senayan, Jakarta
Tel.: 587169, 586997, 587119, 587156
Cable: LITBANG PK JAKARTA

NADEC-Malaysia
Ministry of Education
Kuala Lumpur, Malaysia
Tel.: 922066
Cable: PELAJARAN

NADEC-Philippines
College of Education
University of the Philippines
Diliman, Quezon City
Tel.: 999322
Cable: UPCEDNADEC

NADEC-Singapore
Vocational and Industrial Training Board
Vocational Drive
Singapore 0513
Tel.: 7757800
Cable: VITRAIN

NADEC-Thailand
Office of University Affairs
Si Ayutthaya Road
Bangkok 4, Thailand
Tel.: 289695, 289699, 2814598

Each NADEC is headed by a Director who serves as the overall administrator for the implementation of each of the five sub-projects at the national level.

The Regional Coordinating Committee (RCC) is composed of the NADEC heads/directors and is responsible for overseeing and reviewing the regional and national activities of the ADEP. For this purpose, the RCC adopted guidelines for the effective implementation of ADEP. The Director of NADEC-Philippines was designated by the RCC to serve as the Regional Coordinator for the technical affairs of the ADEP. However, each NADEC was assigned to coordinate the regional activities of a Sub-Project, thus:

Sub-Project	Regional Coordinator
Educational Management Information System	NADEC-Malaysia
Special Education	NADEC-Insonesia
Teacher Education Reform	NADEC Philippines
Test Development	NADEC-Thailand
Work-Oriented Education for In-School and Out-of-School Youth	NADEC-Singapore

Aside from formally coordinating the regional activities of their respective sub-projects, the member countries were expected to actively participate in every regional and national activity of all five sub-projects. Singapore, however, considering her current concerns and priorities, has opted not to participate in the Sub-Project on Special Education.

The member countries were expected to try, as much as possible, to follow very closely the yearly schedule of activities of each sub-project within the corresponding budget.

It is to be noted that in the management of the ADEP, there was a deliberate effort to refrain from establishing a new regional agency and to optimize the use of existing resources in the region. This approach encourages ASEAN countries to help one another in developing their national capabilities and capacities.

The major activities under each of the five sub-projects of the ADEP have been planned over a three-year period. However, due to a late start in the implementation of ADEP in October 1980, this was extended to a fourth year within the approved budget of ADEP, to ensure that every approved activity has adequate time to be properly implemented. Each year, during the four-year period, each sub-project implements a set of specified activities.

In order to ensure the effective monitoring of the progress of the ADEP, evaluative measures including the summative evaluation at the end of the four-year period have been incorporated.

Biannual Review of ADEP Activities

The RCC biannually reviews the progress of the ADEP in all the member countries and determines the activities to be pursued during the next six months. Progress reports and financial statements of each of the five sub-projects are reviewed. The RCC also makes adjustments in the schedule and budget of the ADEP, guided by the principle that in no case shall the budget exceed the total amount of A$2.6 million approved by the Australian Government. Thus, while it was found necessary to extend the ADEP activities beyond 1983 as originally approved, the extension did not materially change the budget for a four-year period. During the tenth RCC meeting, it was decided that implementation of ADEP be extended to June 1985.

IMPROVING TEACHER EDUCATION: PATTERNS OF INTERNATIONAL COOPERATION FROM THE PERSPECTIVE OF THE ARABIAN GULF STATES

PANELIST'S COMMENTS

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"In the Name of Allah, the Merciful, the Compassionate"

It is our honour to meet on this important occasion and to discuss one of the most critical issues affecting the future of mankind. I shall focus on Improving Teacher Education: Patterns of International Cooperation from the Perspective of the Arabian Gulf States. Although the Gulf States are used as a primary referent, the discussion of issues, trends and international cooperation should be relevant to other countries.

I shall discuss as well the impact of social forces on society and education to set the stage for the discussion of teacher education. The world society faces a future that is fraught with difficulty and uncertainty, poverty, ignorance, illness, bigotry and discrimination, technology, modernization, industrialization, educational inequality, political struggle endangered by irrationalism, and growing personal and social anxiety. These are current social forces influencing today's schools and shaping proposals for the future.

Charles Frankel of Columbia University saw as the greatest challenge to man his keeping pace with the rapidity of change in his physical, social, intellectual and emotional environment. He feels that education is the crucial factor in helping man transform both himself and his environment (1, p.2).

Education entails the full development of the intellectual capacities of the individual. This means nothing less than achieving the maximum possible education for every individual -- education in the requisite knowledge and skills for vocation and profession, and education in that human knowledge and wisdom that frees the mind from the bondage of ignorance and the spirit from hopelessness and fear (2, p.54).

Only full commitment and educational effort that exceeds our past accomplishment will promote the quality of life that is necessary for the preservation of human dignity, freedom, and equality of opportunity.

One may wonder what this means for the teacher or prospective teacher. It suggests, among other things, that present and future educators must be sensitive to their times, to man's physical and social problems and to issues relevant to their students' lives.

Teacher Education in the Arab Gulf States

In order to understand the main objectives and purposes of education and teacher education in the Gulf States, it is important to perceive the ideological background of the region. An outstanding fact about the Arab Gulf States is that it is predominantly Muslim. Islam is a religion preached by the Prophet Mohammad and carried around the world by Arabs and later their converts. We are much more concerned here with the fact that Islam forms a predominant and substantial portion of the heritage of the Arab World. Not only has it influenced beliefs and attitudes, language, expression, and mode of life to a very deep extent, but it had also brought the Arabs to a position of world domination in the past, and helped to perserve them as a nation. The Qur'anic classical Arabic language has been preserved as a living language centuries after Arab domination disappeared. And as the Arab World reawakens, the same Arabic language regains vitality.

Here, I shall be pleased to draw your attention to two verses that indicate how Islam urges us towards education and cooperation. The first is the first verse revealed to Prophet Mohammad stressing the importance of reading and knowledge, and it is translated as follows:

> Read in the Name of Thy Lord the Creator Who
> created man out of a mere clot of congealed blood

The second verse is translated as:

> Are those equal, those who know and those who do
> not know

Analysis of this verse reveals the great superiority and high position of those who know in comparison to those who do not know. Among the sayings of our Prophet Mohammad, we find the following:

> Seek knowledge even in China, and from Womb to Tomb

Seeking knowledge is obligatory for every Muslim. We should note that the "Muslim" here includes both males and females. I am sure that one can get out of these verses and sayings a clear concept regarding the attitude of Islam towards seeking knowledge, and the status of education in Islam. Islam shapes the life of Muslims in all fields.

Education is essentially a social process, intimately connected with the stream of life around it, with the currents and crosscurrents of events, with the heritage of the past and the hope of the future.

The background in which the goals of education were set in the Arab Gulf States may be enumerated in the following way:

1. Islamic faith with its comprehensive course for man, universe and life therein;

2. Arabism with its heritage, contemporary issues and hope for the future;

3. social and economic conditions, and issues concerning development in the region of the Arabian Gulf;
4. trends, demands, and characteristics of time, at present and in the future, in compliance with the principles of Arabic and Islamic culture;
5. needs of the Arab individual concerning his growth in the Arabian Gulf region (3, p.3).

Generally speaking, educational goals have been classified into the following basic constituents of experience.

1. Goals related to knowledge.
2. Goals related to skills.
3. Goals related to scientific thinking.
4. Goals related to interests and inclinations.
5. Goals related to attitudes and values. (3, p.17).

Comprehensive goals of education in the Arabian Gulf have been defined as follows.

> Education aims at helping the individual attain functional experience that may give him utmost comprehensive development in moral, psychological, physical, mental and social spheres, which may build up a noble man fortunate in this world and in the Hereafter. At the same time it would realize maximum development of society and environment within the framework of our Arabian values and the tenets of our religion. (3, p.18).

The ideological background as well as the aims of education are determinant factors in shaping the program of teacher education.

The theoretical aspect of teacher preparation consists of the following components: general education, subject specialization, and professional education. In addition to theoretical studies, preparation programs include student teaching and other direct experiences, usually in the senior year of college.

While there are numerous issues confronting teacher educators today, I will focus on just three issues that I believe have direct concern for the Gulf States and for other countries.

Why do teachers leave the teaching profession? Teachers leave the educational system because of unfavourable aspects of teaching. The following are paramount.

1. A teacher's income is seldom equal to that possible in other areas of endeavor.

2. The school and the community make great demands upon the teacher's time.

3. A teacher must live in the public eye. He teaches as much by what he is and does as by what he says in his classroom.

4. Enrollment in many schools necessitates large classes, unpleasant working conditions, shortage of materials, and excessive responsibility for some teachers.

5. Some administrators are non-professional in outlook. They deal with their teachers in ways that impose frustration rather than give a sense of worth. They forget that teachers (men and women) hold in their hands the future careers of their students.

6. Because of the low level of public relations activity, the people in many communities lack adequate understanding of their schools and of education in general. They have difficulty in understanding the teacher's need for better pay, more freedom, professional status and respect, and an equal acceptance in the community along with others with comparable training and experience. Often a teacher is frustrated beyond endurance by the lack of public understanding.

7. Young people facing a "difficult" class as their first assignment either get discouraged and quit or hold on only until they can move on to another school, leaving the tough assignment to another raw recruit. Recognition of the unfairness of this practice has not yet produced a solution.

Should teachers' salaries be based upon merit? A great deal of contention exists over the basis upon which teachers' pay should be determined. Educational organizations have usually supported salary differentials based upon preparation and experience. However, teachers argue that salaries should be based upon the teacher's competence.

A merit salary plan is defended on the grounds that it provides incentive for better work, makes higher salaries available for teachers who really deserve them, stimulates critical evaluation of teaching methods, purposes and philosophy, and encourages more people of top ability to enter and remain in teaching.

Although the principle of rewarding service on the basis of merit is accepted as desirable, the means of achieving the principle is held by many to be unfeasible. The search should be continued for better ways of identifying outstanding teachers so that they can achieve the higher salaries which they deserve. If this problem could be solved it would do much to raise the upper limits of teacher's salaries, and thereby attract more top-quality people to the profession (4, p.486).

What should be the nature of inservice training? The expansion of the elementary schools in the Gulf States and the growing number of schools at all stages and all areas of education has made it imperative for the governments of the Gulf States to take a great interest in the training of teachers. Elementary school teachers have been prepared in a two-year course after secondary school, in order to meet the demand for teachers at the elementary level.

Greater attention has been given to the quality teaching by using inservice education after teachers begin teaching. Much experimentation and discussion are being applied to the problem of raising the standards of teaching.

The chief problems with regard to the education of teachers in the developing countries are both qualitative and quantitative.

On the qualitative side, greater attention should be given to the preparation of rural school teachers. The countryside should get more highly skilled teachers. If it is true that attention in all these countries should be given to the development of their agricultural resources, then their rural life needs to be reconstructed. Teachers are needed for the rural districts who not only master the common subjects, but who also have an adequate acquaintance with agriculture and with the social and health problems of the countryside.

Special rural teachers colleges have been established in some countries where agricultural and health training are given to the students along with academic subjects, and students are recruited from the countryside itself. The general plan seems to be correct, but it is feared that the way it is being handled, largely due to the lack of well trained staffs in the teachers colleges, is not securing the quality of teachers that is wanted for the rural schools.

The future of teacher education in colleges is inextricably interwoven with the future of teaching in the schools. Teacher education will improve in direct relationship to improvement in the status of teachers in the society (5, p.23).

> Reform the school, create the conditions for professional practice, pay teachers a decent salary commensurate with training, and develop other career long incentives which will attract and keep the kind of teacher-scholars that are needed, and we will be able to improve teacher education. Improve the status of teachers and we will improve the funding levels for teacher education. Use teacher education as an instrument to reform the school setting so that teachers are treated as professional decision makers and teacher education institutions will achieve professional status befitting the complexity of the role (5, p.24).

International Cooperation

Education is growing and changing. New vistas of knowledge are being revealed in many academic fields. A technological revolution in instruction has made powerful new media available to the teacher. Government interest has resulted in greater commitment and support for the school all over the world. Most students are more eager to learn than ever. The teaching profession is moving ahead rapidly and the prestige of the teacher is rising. But today's world is striving for excellence in its educational system with the realization that no school can do any better than its nation.

With these words U Thant, former Secretary General of the United Nations, gave expression to the hope of many people around the world:

> . . . teachers of all countries will provide the leadership in man's search for better international understanding, deeper meaning and purpose in living, and a richer way of life for all. Certainly no other person touches the lives of so many people so profoundly as does the teacher (6).

If we agree with U Thant's explicit statement, then international solidarity and world cooperation become more clearly necessary than ever before. Therefore, we suggest the following.

1. Intellectual and operational cooperation must be maintained and be considered on a worldwide scale.

2. Intellectual cooperation in educational experience, and educational innovations in curriculum, teaching methods, and pedagogic research should be made accessible to all countries. Evaluation systems should be established to carry out in-depth analysis of the results of such innovations.

Although the potential benefit from such intellectual cooperation and from exchange of experts cannot be doubted, nevertheless, some results are negative. Some experts have difficulty in adjusting to a new environment, in understanding the immediate and direct needs of the people, and in comprehending the ideology of the country. Therefore, we suggest that better selection criteria be developed, and that various programs in international cooperation be implemented with collaboration of the local regional organizations. For example, the Arab Bureau of Education for the Gulf States (ABEGS) is a regional organization for education, culture and science. It was founded in 1976 in Riyadh, Saudi Arabia, the present site of its headquarters. ABEGS has seven member countries all of which border on the Arabian Gulf. These are The State of Bahrain, The Republic of Iraq, The State of Kuwait, The Sultanate of Oman, The State of Qatar, The Kingdom of Saudi Arabia, and The United Arab Emirates. The main goals of the Bureau are to:

1. coordinate, integrate and unify efforts by member states in the fields of education, culture, and science;
2. reinforce unity among the Gulf people and strengthen their cultural ties and links;
3. establish an educational system on a scientific basis with clearly stated goals;
4. create joint educational centers and institutions, and strengthen cultural ties and links, stressing the Arab Islamic character of the region.

In summary, international cooperation and understanding should aim toward the well-being of the whole human race, bearing in mind that education is the only avenue for eradicating the social pathological problems which are common in today's world.

International understanding and cooperation should be through consultations, mutual representations, evaluation of progress, analysis of world problems, peace, development, exchange of data and information, elimination of racial discrimination, stressing of freedom and human rights, improvement of adult education and education for women, education for the handicapped, education in the less-developed areas and increase of technical skills and practical knowledge.

I conclude my presentation recalling U Thant's wonderful statement:

> Every step forward on the highway of history has been the result of cooperation. Today's cooperation is not only a natural condition of human progress, but the pre-condition of continued human existence itself. (6)

Before closing I should recall that meaningful verse from the Holy Quran regarding cooperation:

> Help ye one another in righteousness and piety,
> But help ye not one another in sin and rancour.

Thank you for your consideration and patience.

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SECTION VII

Summaries of World Assembly Discussions

INNOVATIONS IN PRESERVICE EDUCATION: SUMMARY OF CONCURRENT SESSION DISCUSSIONS

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Three questions were raised for discussion during the concurrent sessions, concerned with innovations in preservice teacher education.

The first question asked for suggestions for possible alternatives for improving the preservice program. The discussion groups tended to agree that the length of training programs should be increased, and that a goal of four years should be the minimum. It was suggested that there be established a general international standard for program duration. It was considered suitable to consistently award the bachelors degree for such four-year preparation.

Some concerns were expressed that longer training programs cause a decrease in the numbers of teachers because of their unwillingness or inability to devote the requisite four years to attain the degree. It was widely felt, however, that this possibility would be more than compensated for by a policy focussed on the quality of teacher preparation.

The generally expressed desire for quality led to a nearly unanimous recommendation that means should be devised to attract more able students to the teaching profession, for, as Dr. Wichit had pointed out in his keynote address, "Too many teachers are being drawn from the bottom quarter of graduating high school and college students." Among the means suggested were offering higher salaries to qualified teachers, and increasing the number of attractive opportunities for further study on the one hand and for additional periodic inservice training on the other.

In addition, it was felt that teacher educators themselves have an obligation to enhance by their actions the self-esteem of members of their profession, and to pass on to their students an awareness of the significance of the teacher in the advancement of civilization and society.

Another means of improving preservice teacher training suggested was careful screening of candidates at the initial stages of teacher preparation. Part of the criteria set up for this purpose should include aptitude for teaching.

Group discussions of program content led to no recommendations for drastic reform, but reflected rather the sense that deliberate and somewhat gradual changes should be made to adjust and adapt teacher preparation to the technological and societal changes of the modern world.

A final suggestion stressed the significance of preservice and inservice training of teachers for nursery schools as an integral part of the structure of teacher training programs. In addition, it was suggested that there should be a central body to insure the maintenance of standards in the teaching profession at all levels.

The second question brought forth for group consideration asked for comments about the presumed benefits to be derived from placement of teacher training programs at the tertiary, or higher education, level. The ensuing discussions yielded the following points:

1. Tertiary level teacher preparation will clearly provide teacher candidates with more thorough background in both subject areas and methodology.
2. Teacher motivation towards continuing self-improvement subsequent to their formal preparation will be enhanced.
3. The public will increasingly respect and support the teachers to whom they have entrusted their youth.
4. Finally, and most importantly, students will benefit from their exposure to more highly qualified teachers.

The last question asked for comment and opinion on the factors entering into the selection and distribution of the components of preservice teacher training programs.

Most group members seemed to feel that theory and practice must go hand in hand. Equal consideration ought to be given to general studies and specific content areas on the one hand and to methodology instruction on the other. And, importantly, practice teaching, which mostly occurs towards the end of teacher training programs, ought to take place throughout the process of teacher preparation.

One group suggested that distribution requirements vary in accordance with the area of teaching. Some felt that vocational programs, for example, should emphasize content more than methodology while primary education specialists ought to give equal weight to content and methodology. For all these instances -- primary, secondary, vocational -- all courses must be part of a structural whole, so integrated that a maximum impact on teaching practice will be made.

Group members also recommended that those potential teachers with qualifications in specialized fields must receive training in methodologies appropriate to those fields before going out to teach.

One theme seemed to run through the discussions of all groups: regardless of the length or content of a preservice training program: prospective teachers must be stimulated to engage in continual self-development. We must encourage prospective teachers to view teacher education as a life-long process. We must encourage them to be always aware that it is important to "learn how to learn." In this conection, time must be devoted to subjects which develop critical thought, so that teacher trainees will come to the view that acquisition of knowledge is a constant, dynamic and continuing process. Such an attitude will both enhance the trainees' own personal growth and lead to more interesting and challenging experiences for the students to be placed under their charge.

INNOVATIONS IN INSERVICE EDUCATION: SUMMARY OF CONCURRENT SESSION DISCUSSIONS

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In addressing the question of what are some of the currently promising models for improving inservice training, the groups identified a number of programs, workshops, seminars and other opportunities for further study. Two groups suggested "update/upgrade" programs. Update programs were defined as those involved in increasing skills as opposed to academic rank. Thus there would be a need for some incentive unrelated to promotion. These update programs could be conducted either by colleges and universities, educational associations, or individual schools or school systems. The upgrade programs, on the other hand, would involve more extensive course work leading to increase in professional rank.

Several types of workshops were suggested to enhance teachers' capabilities -- a hands-on computer workshop, a workshop to introduce basic computer concepts and content, and workshops in mathematics, science, and education administration. There were also suggestions for seminars, conferences, and symposia -- both within and outside the country -- to afford teachers the chance to exchange ideas and gain new knowledge.

Several of the groups mentioned affording teachers the opportunity for further study -- either long or short term, and either inside the country or overseas. Another suggestion was a one-year sabbatical leave to conduct research or write a book. One more possibility was participation in a special summer course conducted by a specialist in a particular field. The availability of these opportunities was felt to depend largely on supportive administrators.

Several groups suggested specific staff development processes or models. One group mentioned a staff development program which would enable teachers to become administrators.

One group spelled out the following five-step staff development process:

1. Carefully screen candidates who will enter the staff development program;

2. Assess the qualifications of teachers -- both university graduates and non-graduates -- through the use of competency based criteria, and help them improve their qualifications;

3. Change the pattern of incentives so that teachers can envision advancement in the profession and wish to remain in it;
4. Designate centers in local areas that can be responsible for teacher development in these areas;
5. Take into account the quality of the trainers as well as of the trainees in the provision of staff development programs.

Another group differentiated models of inservice training according to conventional universities and open universities. With respect to the conventional system, the group recommended that:

1. Key personnel should be trained to serve as trainers for other teachers;
2. Teachers who are teaching academic areas for which they have an insufficient academic background should receive special intensive training during breaks in the academic year;
3. Teachers should study further in the field of education.

With respect to the open system, the following two points were made:

1. Teachers should adhere to existing ethical standards;
2. Mass inservice training like the short-term programs offered by Sukhothai Thammithirat Open University should be implemented elsewhere.

A second question raised in the discussion groups was concerned with how education systems can provide incentives for self-improvement among the teaching force. Several possibilities were discussed. These included pay increases and promotion in academic rank, additional work-related benefits, and various opportunities for self-development.

One group suggested a two-step pay increase instead of the regular one-step increase for teachers who had received additional training or who had gone on for further study. Another group recommended increasing teachers' salaries to bring them more in line with those of other professions. Still another group suggested merit pay increases. Others suggested that advancement in academic rank should be linked to participation in inservice teacher training.

One group mentioned that the capabilities and potential of teachers, rather than academic qualifications, should be considered in awarding promotions. Another suggestion was that teachers who had shown progress in their profession should be rewarded with long-term contracts.

A further recommendation was for the awarding of certificates and citations to outstanding teachers.

Several groups mentioned the role of the administrative staff in spelling out clearly how teachers would be rewarded for inservice training and then motivating them to participate in updating or upgrading courses. The point was made that unless such courses are recognized and rewarded by administrators, there will be no incentive for teachers to seek opportunities for professional development.

Evaluation criteria should be made clear to teachers so that they would know on what basis they are being evaluated. In particular, they should know what the criteria are, who are responsible for the evaluation, and how the process of evaluation is conducted.

Other groups felt that the chief source of motivation for self-improvement should be intrinsic. That is, the teachers themselves should feel the need and desire for improvement. One group recommended that teacher training institutions should revise their teacher training curriculum in such a way that an awareness of the need for self-improvement is created among the teachers. Another group added that teachers must be made to recognize that education is an ongoing process that does not end at graduation. It must continue throughout the professional career.

The final topic of discussion dealt with what the most important areas of study and training are that should be conveyed through the inservice teacher training scheme.

Several groups suggested improving teacher's competency and capability in their subject areas and in teaching methods. In order to upgrade/update teachers, the groups proposed that teachers should be well informed about new content, about new technologies, about methodological practices, and human relations skills.

Most of the groups suggested that inservice teacher training programs would best accomplish their goals if the following factors are taken into account:

1. Economic security for teachers;
2. Opportunities for professional renewal;
3. Maintenance of teacher self-esteem;
4. Maintenance of ethical standards;
5. Attainment of morale;
6. Diversity of opportunity within the profession.

INTERNATIONAL DIMENSIONS IN TEACHER EDUCATION: SUMMARY OF CONCURRENT SESSION DISCUSSIONS

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A number of terms were used in the plenary and concurrent sessions that relate to incorporating a global dimension in teacher education programs. Definitions for these terms emerged from the discussions, and they are presented below.

> International Education: a broad term dealing primarily with interrelationships among nations, focusing on in-depth knowledge about different countries.
>
> Global Education: an issue-oriented approach in which important issues that transcend national boundaries are considered (e.g., environmental issues, pollution, world peace).
>
> Multicultural Education: in the United States, at least, this refers to primarily domestic issues related to different cultural groups, and is then extended outward to involve interdependence among peoples in different countries.
>
> Education for International Understanding: embracing the three terms mentioned above.

It was generally agreed that incorporating an international dimension in teacher education programs would lead to increased international understanding, a heightened appreciation of the many cultures of the world, and a greater chance ultimately for world peace.

One group pointed out that children find it stimulating to learn about other parts of the world. Such knowledge would hopefully lead to a more peaceful, friendly world. One innovative approach along these lines was an exchange of pictures and messages between sixth grade students in Eau Claire, Wisconsin, U.S.A., and Velikiy Ustyug in the Soviet Union, mentioned in a paper by Charles Park. The American children sent gifts and messages from local businesses, organizations, government officials, and individuals. Their counterparts in the Soviet Union, in turn, sent paintings and woodcuts, and one girl wrote, "On behalf of the children of Velikiy Ustyug, I am sending cordial greetings to all children in Eau Claire. Let us be friends . . ."

Another group mentioned that studying the education system of a country provides insight into other aspects of the country, for example, its political system and philosophy. Another group felt that one of the chief advantages of incorporating a global dimension was that it enables teachers to see their own culture and educational system more clearly. Analysis of a different culture provides a mirror in which they see reflected the characteristics of their own culture and education system.

With respect to the question of what are the aspects of teacher education curriculum that are most appropriate for infusion of a global perspective, there seemed to be considerable support for the inclusion of a global perspective in all aspects of professional education.

Some suggested that an international dimension would be more concentrated in such fields as social studies education, general education, educational technology, educational research, and literature. The point was made in one group that a global perspective should be included in inservice training as opposed to preservice training. This point was countered by others who felt that perhaps some things in the existing preservice curriculum were not essential and could be replaced. Some suggested that the curriculum for teacher education should be reorganized with global education as the central, organizing core.

As for the question of what steps should be taken to make global education an integral part of teacher education, several suggestions were offered. One was to identify themes appropriate for study in education that also develop international competencies. Another was that some type of required course on international education be included in the curriculum. The global dimension must be institutionalized if it is to be taken seriously by prospective teachers.

Several specific and innovative approaches to the inclusion of global education in teacher education were presented in various discussion groups. One of these was the development of international education at the University of South Carolina College of Education. It involves the following five steps:

1. Orienting faculty to other countries and cultures mainly by sending them abroad to teach, consult, and study;

2. Incorporating what faculty have learned from overseas experience into their courses when they return home;

3. Injecting an international dimension into all aspects of the curriculum;

4. Using relevant non-curricular aids, such as foreign students or international organizations as resources;

5. Building specific core courses that would form the base for international degree programs and serve as selected courses for traditional degree programs.

Another specific example is the use of multicultural modules in preservice teacher education at the University of North Carolina at Charlotte, as presented in the paper by Huffman and Schaffer. A specific module focusing on multicultural awareness has been incorporated into an undergraduate teaching methods course. During the first phase of the module, students are asked to choose a country, and observe for one week any references to that country in the media, product labels, conversations, lectures, and the content of other courses. The objective is to have students identify how perception and opinion of the U.S. public is shaped through everyday contact related to foreign countries.

The second phase of the module requires students to do research on the selected country and to compare this to life in the United States. A questionnaire is distributed asking for information about foods, holidays, activities, expressions from the language, two things visitors should not do, five positive characteristics about the country or its people, etc. Students are also asked to list something important about various concepts related to culture, such as time, money, nature, religion, male-female relationships, marriage, death, and friendship. Examples of non-verbal communication, attitudes and values are also required.

The third phase of the module includes discussion of the evolution of thinking regarding foreign language in the U.S.A. since 1914. The role of the teacher and how the teacher plans for multicultural experiences is also addressed.

Another example is the dynamic of having numbers of foreign students in education programs, as described in the paper by Nancy Quisenberry of Southern Illinois University. To be responsive to the students' needs and to honor the academic achievements of the students gives U.S. Colleges of Education splendid opportunities to begin the process of internationalization. Course content is altered, course requirements are evaluated, and joint discussions among faculties, officials and students bring about greater understanding of and response to the countries and peoples involved.

A final example is the Human Relations Course for teachers required by St. John's University of New York, described in the paper by Teresa Trimarco. This course aims to sensitize prospective teachers to the dynamics of intercultural communication. It involves sharing aspects of one's cultural heritage such as food, music, and dress, reading assignments, field experiences, and role playing.

Finally, the question of how ICET could promote global education was raised. It was suggested that ICET continue to serve as a clearinghouse for information distributed on request.

INNOVATIONS IN EDUCATIONAL TECHNOLOGY: SUMMARY OF CONCURRENT SESSION DISCUSSIONS

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As the cost of technology is significant, and money is scarce, it is best to proceed cautiously in employing technology in the preservice preparation of teachers.

Students are being made aware of technology more than before, and video is being used in mini-teaching settings. Computers should be used to benefit the largest number of people possible. One area they should be used in is to obtain better access to relevant information.

For the Thai education system, it was agreed that modern technology could be employed advantageously in both inservice and preservice teacher education, as well as in school instruction.

The economic and social conditions of the country should be considered, though, and technology should be adapted to suit local conditions. An integrated model, such as that presented by Nishinosono, could aid preservice teachers to expand their repertory of learning styles in a systematic way. They could learn how assessment of teaching/learning performance could lead to adapted and modified instructional approaches. Nishinosono's integrated computer-based educational model, used at the moment on an experimental basis in Japan, is designed to support the classroom teacher through the use of technology, data bases, and objective/subjective feedback.

Another discussion group stressed the importance of choosing suitable software for students. Everyone concerned with this field, including administrators, should plan together. The process begins with teacher educators, and includes the training of trainers and the training of teachers.

Another group stressed that only radio and audiotape are appropriate at the moment for preservice preparation of primary-level school teachers. At the secondary level, however, a more sophisticated technological approach, including television and videotape, if available, may be effective. Teachers should be familiarized with this equipment as part of their training.

Whatever technology is chosen, governments should distribute it fairly among both urban and rural areas. Provincial technology centers should be set up, with tools for access. Appropriate local tools, instead of technology from the West, should be used wherever possible.

Time can be saved, and teachers kept aware of new methods, techniques and tools to be used, through educational technology. Feasibility studies are important for narrowing the choice of tools to be used, and teacher training institutions should have a special unit whose responsibility is to apply the new technology to teaching. A cautious note was sounded with respect to indiscriminate acquisition of new technology without using existing materials and tools -- leading to extravagance and waste.

With respect to the question of how new technologies can best be employed in the inservice, continuing development of teachers, it was agreed that instructors familiar with the new hardware and with process-oriented software should be involved. software. New technology could gradually be introduced into teacher training, in workshop situations, to give teachers a chance to use it.

Another group thought that a special agency, either national or international, should be set up to deal with the problem of acquisition of expensive new technology. Institutions specializing in the application of educational technology, such as the Ministry of Education, STOU, and so on, should produce and make available materials like movies, videotapes, and television programmes, for continuing inservice teacher training. The groups that mentioned this proposed establishment of a national education technology center to produce, compile and disseminate training materials for teacher development. This center should eventually be expanded to provincial and regional levels.

Another group warned against depending too much on such aids for inservice training, saying that the teacher still has the primary role of awakening creativity in the student. The long-term, possibly undesireable, effects of such technology on students should be considered.

The first step would seem to be for governments to give out sources of information about educational technology to teachers and educators. One group thought that radio was the appropriate medium for disseminating this type of information.

With respect to the question of how technology can be best employed in sharing educational expertise and curriculum matierials on an international basis, there was a strong feeling that sharing between countries is desirable, especially regarding the applications of technology to education of people in rural areas. Another group mentioned the need for an institution which would gather and translate into Thai relevant information, and would produce and disseminate throughout Thailand both software and hardware packages. Additionally, minicomputers were praised as repositories for useful information that can be retrieved quickly.

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